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CONTENTS

PAGE

Preface: HENRY E. SIGERIST 669

PAPERS

An Episode in the History of Smallpox Vaccination in New Hampshire: MORRIS C. LEIKIND 671

The Place of the Amateur in the Writing of Medical History: W. B. MCDANIEL, 2nd 687

The Nursing Can: HOWARD DITTRICK 696

Syphilis of the Center of the Face: FRANKLIN H. CHURCH .. 705

The Hippocratic Oath in Reference to Lithotomy. A New Interpretation, with Historical Notes on Castration: SAVAS NITTIS 719

The Ideological Basis of Discovery: IAGO GALDSTON 729

John Gilchrist, J. P., L. M. B. U. C., M. P., A Pioneer New England Physician in Upper Canada: JABEZ H. ELLIOTT 737

PAGE

Occupational Diseases of English Seamen During the Seventeenth and Eighteenth Centuries: GEORGE ROSEN..... 751

A History of the Care of the Sick Poor of the City of Detroit (1703-1855): ROBERT S. DREWS..... 759

Some Distinguished American Medical Students of Pierre-Charles-Alexander Louis of Paris: WALTER R. STEINER 783

Medical History in Clinical Teaching: WILLIAM G. LEAMAN 794

MEMOIRS OF DECEASED MEMBERS

Sir Andrew Macphail: W. W. FRANCIS..... 799

Karl Sudhoff: HENRY E. SIGERIST..... 801

Alfred Oughton Lee: KYRIL B. CONGER..... 805

ANNUAL REPORTS OF CONSTITUENT SOCIETIES

The Boston Medical History Club, Boston, Mass..... 807

The Johns Hopkins Medical History Club, Baltimore, Md.. 809

The Cordell Historical Society of the University of Maryland, Baltimore, Md..... 811

Medical History Club of Charleston, Charleston, S. C..... 813

Indiana Association of the History of Medicine, Indianapolis, Ind. 814

The Innominate Society, Louisville, Ky..... 815

The History of Medicine Society at Tulane University, New Orleans, La..... 818

The William Welch Society of New York University College of Medicine, New York, N. Y..... 819

The New York Society for Medical History, New York, N. Y..... 821

The Osler Society of Medical History, Oklahoma City, Okla. 823

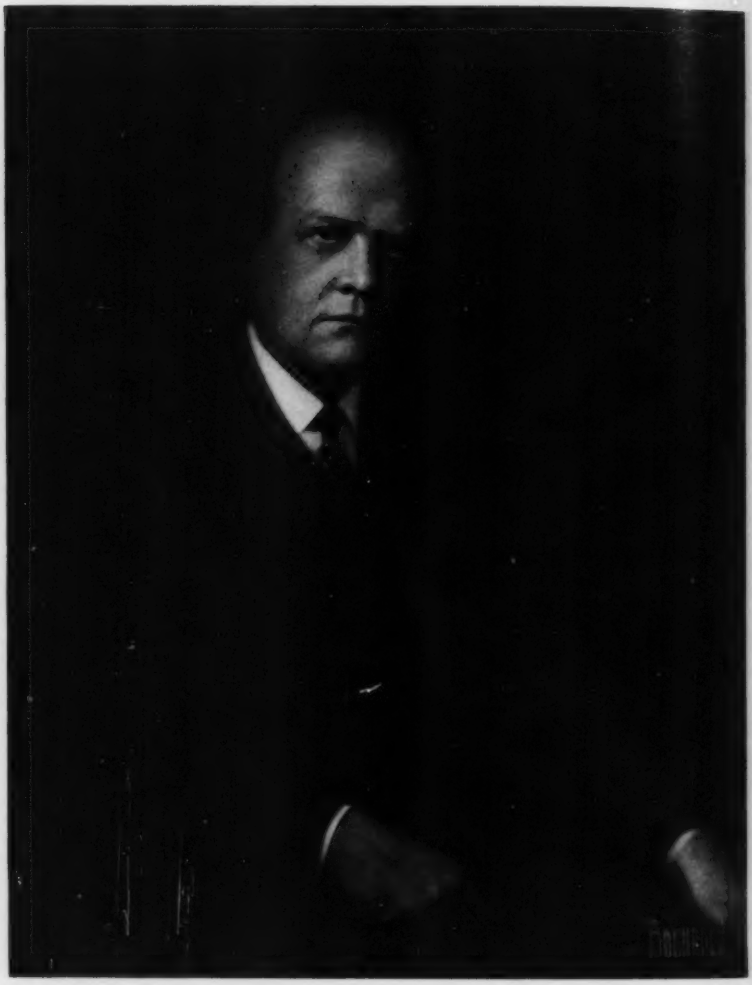
The Caducean Society of Creighton University, Omaha, Neb. 826

Section of the History of Medicine of the Richmond Academy of Medicine, Richmond, Va..... 829

MEETING OF THE COUNCIL..... 831

BUSINESS SESSION OF THE ANNUAL MEETING..... 845

REPORT OF THE ACTIVITIES OF THE JOHNS HOPKINS INSTITUTE OF THE HISTORY OF MEDICINE..... 847



DR. WALTER R. STEINER

President of the American Association of the History of Medicine, 1938-1939.

UNIV. OF MICH.

PREFACE

The *Fifteenth Annual Meeting* of the American Association of the History of Medicine was the first meeting held under the new Constitution. In previous years the Association had only two sessions, one in the afternoon and one dinner session. This year we had three scientific sessions held on Monday, May 1 in the morning, afternoon and evening. The Council, in addition, held two sessions in the afternoon and evening of Sunday, April 30 to which the members of the Association were invited. Even so, it was felt that the program was rather crowded and in the future we may have to consider a further extension of the meeting.

The Constitution authorizes the President to " accept or reject any paper, to limit the number of papers and to set the time limit for each." If ever possible the number of papers will not be limited as the Annual Meeting is for many members the only opportunity to present the results of research before a national audience. The time limit was set at 20 minutes this year and the speakers submitted to this regulation with remarkable discipline. It would be difficult to reduce the time limit still further. The results of experimental work can often be summarized in a few minutes. The results of historical research, however, can not be expressed in figures but only in words and if a paper is to be convincing a certain minimum time must be available. It would also be unwise to limit the discussion unduly. It is just the exchange and sometimes clash of ideas that make these meetings so fruitful.

For the first time the Association is publishing its *Transactions*. Eleven of the 14 papers read at the Annual Meeting are included in this number. Two papers had already been promised to other journals [1] and one will be published later in expanded form.[2]

[1] John W. Draper, " The Old Age of King Lear " will appear in *The Journal of English and Germanic Philology*.—David Riesman, " Clinical Teaching in America with Some Remarks on Early Medical Schools " has been published in *Transactions and Studies of the College of Physicians of Philadelphia*, 4 Series, Vol. 7, No. 1, Published April, 1939, pp. 89-110.

[2] Albert Deutsch, *Provision for the Sick Poor in Colonial Times.*

For the first time we are also publishing *Memoirs* of the deceased members of the Association, and in the past year our loss has been particularly heavy.

The annual reports of the Constituent Societies follow. Short as they are they seem to me very important as they inform us about local activities in the field of medical history. I would advise all those members who are active in local groups to read them very carefully. The activities of such student organizations as the William Welch Society of New York University and the Caducean Society of Creighton University in Omaha are extremely promising. I was also very much interested in the activities of the History of Medicine Society of Tulane University. This group began its work in 1933 with meetings of the membership. It then made the meetings available to the student body of the entire Medical School so that the meetings became regular classes until in 1939 the University felt the necessity of establishing regular courses in medical history. I think these annual reports can teach us a great deal.

The number then contains the minutes of the *Council Meeting* and of the *Business Meeting* of the Association, so that in the future we shall have a printed record of our discussions to which we can refer at any time.

The number ends with the *Report of the Activities of the Johns Hopkins Institute of the History of Medicine for the Academic Year 1938 to 1939*. Since the Bulletin is the joint organ of the Association and of the Institute, the members, I am sure, will not mind that a special place has been given to the annual report of this Constituent Society.

HENRY E. SIGERIST

AN EPISODE IN THE HISTORY OF SMALLPOX VACCINATION IN NEW HAMPSHIRE [1]

MORRIS C. LEIKIND [2]

Although much has been written on the beginning of smallpox vaccination in America, most of the accounts have been largely confined to biographical sketches of the early vaccinators, discussions of the clinical phenomena and descriptions of early vaccination techniques. Very little has been written on the economic and social factors involved in establishing vaccination as a recognized medical procedure. For light on the question of fees, the relationships of doctors to each other and to their patients we must study contemporary documents such as fee bills, letters and contracts. It is in fact on the study of just such a collection of manuscript material, much of it hitherto unpublished,[3] that this paper is based. Fragmentary though the account is, it provides some insight into the economic and social factors involved in the practice of vaccination and distribution of vaccine virus to physicians and their patients.

In 1799, Dr. Benjamin Waterhouse, Professor of the Theory and Practice of Physic at the Harvard Medical School in Cambridge, Massachusetts, received from his friend Dr. Lettsom of London a copy of Jenner's " Inquiry into the causes and effects of the variolae

[1] Read at the Annual Meeting of the American Association of the History of Medicine in Atlantic City, N. J., May 1, 1939. Also read in part before the Washington Branch of the Society of American Bacteriologists at the Army Medical School, Washington, D. C., March 21, 1939.

[2] From the Institute of the History of Medicine, The Johns Hopkins University, Baltimore, Md., and the Library of Congress, Washington, D. C.

[3] This study is based in part on hitherto unpublished letters and papers found in the Josiah Bartlett Collection owned by the Library of Congress. All the documents transcribed and reproduced are marked here with the symbol (B). In studying the material it was found that some of the letters in the Bartlett Collection fill gaps in a collection of letters previously published in a life of Dr. Lyman Spalding (Dr. Lyman Spalding . . . , by Dr. James Alfred Spalding. Boston, W. M. Leonard, 1916, viii, 380 pp.). In order to give continuity to the story here recounted certain of the letters were borrowed from the Spalding biography. They are marked with the symbol (S) with the page reference immediately following.

vaccinae, or cowpox." Waterhouse[4] tells us, ". . . On perusing this work, I was struck with the unspeakable advantages that might accrue to this country and indeed to the human race at large from the diffusion of a mild distemper that would ever after secure the constitution from that terrible scourge the smallpox. . . . As the ordinary mode of communicating even medical discoveries in this country is by newspapers, I drew up the following account of the cowpox, which was printed in the Columbian Sentinel, Mar. 12, 1799, under the title: 'Something curious in the medical line.'" This was essentially a resume of Jenner's book. From Waterhouse again, we learn of the reception of this notice: "This publication shared the fate of most others on new discoveries. A few received it as a very important discovery, highly interesting to humanity, some doubted it; others observed that wise and prudent conduct which allows them to condemn or applaud as the event might prove: while the greater number absolutely ridiculed it as one of those medical whims which arise today and tomorrow are no more." But this ridicule did not dismay Waterhouse. He was determined to try the new protection against the dreaded smallpox and see its action for himself. In July, 1800, having secured some of the vaccine matter from England, he proceeded forthwith to vaccinate his children and several domestics, seven persons in all. Soon after they recovered from the effects of the vaccination they were sent to a licensed smallpox hospital in Boston where they were inoculated with smallpox virus as a test of the protection afforded by the Kine-pox. All proved resistant. These first experiments of Waterhouse were a complete and triumphant vindication of Jenner's claims.

This successful experiment encouraged patients of Dr. Waterhouse to try the treatment. Some fifty persons were inoculated in a short time, there were no ill effects and the word began to spread that vaccination was indeed all it was claimed to be. Waterhouse soon found himself deluged by requests from physicians for the vaccine matter.

Among those who wrote to him was Dr. Lyman Spalding of Portsmouth, New Hampshire (b. 1775, d. 1821). Dr. Spalding

[4] A Prospect for exterminating the small-pox . . . by Benjamin Waterhouse. Boston, W. Hilliard, 1800, 40 p.

was co-founder with Nathan Smith of the Dartmouth Medical School, father of the U. S. Pharmacopoeia and Secretary of the New Hampshire Medical Society. Waterhouse replied in a letter dated Sept. 6, 1800, as follows:

(S, p. 54)

> Cambridge, September 6, 1800. Dear Sir. I have only time to say that I have received your second letter and that I will accommodate you with the "matter," etc., at the same pay which has been offered to me, but I declined, namely for One Quarter of the profit arising from the inoculation, and the contract to remain for 14 months from this time. Abandon the idea of inoculating for the small pox and throw all your attention to the Kine-pox. If this idea suits you and Dr. Cutter [5] you shall be accommodated at once, for half a dozen practitioners stand ready to jump at that offer, and two of them are not a very great distance from you. In haste, I am Yours, etc.
>
> BENJAMIN WATERHOUSE.

Spalding's reply to this letter is as follows:

(S, p. 54)

> Portsmouth, September 10, 1800. Dear Sir. The terms are accepted, and I promise that you shall have One Quarter part of the next profit arising from my inoculation with the kine pox for the space of 14 months, provided it be not made public before that term expires, and then the contract to remain in full force only to the time of its becoming public. However, on your part it is expected that the like privilege will not be granted to others in my vicinity. Yours, etc., L. SPALDING.

In the words of Spalding's biographer, "we have here a 'Vaccination Trust.'" But not only is there evidence of attempts at monopolistic practice in connection with the new discovery. We even find evidences of "muscling in on a good racket." On Sept. 12, 1800 Waterhouse again writes to Spalding:

(S, p. 54)

> Cambridge, September 12, 1800. Yours of the 19th [5a] informs me that you accede to my proposal "provided it be not made public before that time expires." Now that is too vague to proceed on. Sam Brown [6]

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[5] There were two Drs. Cutter, father and son, in Portsmouth. It is not clear which one is referred to.

[5a] The date 19th is probably a misprint and should be read "10th."

[6] A classmate of Spalding's at Harvard. He was attempting to buy scabs from patients inoculated, and tried to use these scabs for treating his own patients.

may steal it before a month expires, and then in six months it may be diffused all over Boston, or it may not. I therefore propose that shall be for twelve months and that will leave you to yourself during the three autumn months of 1801. You however will have got the start of all others, so much that no one can rival you entirely; besides it will fix you in business. My fee is Five Dollars. You must engage not to supply any other practitioner. Your acceeding to this will fetch the infection next post. If you wish to come and see the disease, and my practice, you shall have that in the bargain. Yours, B. WATERHOUSE.

P. S. I have a similar application from Amherst in your state and another from a young doctor going to settle at Hampton. But, if Dr. Cutter and you and I make the contract proposed, this gentleman will not be supplied. I will supply none within twenty or thirty miles of you and perhaps further.

Letters were shuttled back and forth, Waterhouse holding out for more pay and insisting that Spalding take an older man as a partner, thus further increasing the royalties; Spalding holding out for an individual contract in order to be the first in Portsmouth, thus giving him a monopoly of the practice. In an undated letter, Spalding writes to Waterhouse as follows:

(S, p. 55)

Dear Sir: . . . I applaud your policy of making a few guineas for yourself considering what pains you have taken in procuring and experimenting upon the Kine-pox. Now Sir, far from inoculating gratis or endeavoring to procure the infection by stealth, if you will permit me to inoculate I will give you ten per cent upon the fees received for it, till you shall, or by other means, and not through my carelessness, it shall be made public. If these terms coincide with your ideas, you will forward the infection IMMEDIATELY, for "Now is the appointed time" and I promise you shall receive your premium without the least shadow of fraud.

With fidelity

LYMAN SPALDING.

P. S. How do you obligate your patients to prevent the infection being taken from their pustules! !

N. B. I expect the same privilege will not be granted to any other person in this vicinity!

Waterhouse finally yields to Spalding. He writes on September

18th that he is enclosing a bond [7] to be executed whereupon he will send the virus. He also outlines a scheme to divide the State of New Hampshire into vaccination districts. The letter follows:

(S, p. 56)

Cambridge, September 18, 1800. Dr. Spalding, Dear Sir: I am sorry, very sorry that you did not come in person to negotiate the business of inoculation instead of doing it by letter, because every day brings me fresh applicants on the same subject. I have had three physicians from New Hampshire with me these two days, and during their waiting for my determination, I received what I absolutely waited for, your letter, which when read I was disappointed in finding no mention made of Dr. Cutter, whose name you mentioned as connecting in your plan in your first letter. As these gentlemen could not tarry any longer, I finally concluded and exchanged bonds, of which the enclosed is a transcript (Mutatis Mutandis) to inoculate the three counties of Strafford, Grafton and Rockingham, excepting the town of Portsmouth, Newington, Rye, Kittery, Greenland and Dover, on an intimation that Dr. Cutter practiced considerably in the last-named town. Thus, have I endeavoured to do what I conceived right, just, and honorable towards you, Dr. Cutter and them. I wished exceedingly that you had been present, but pressed as I have been on all sides I feel as if I had done for the best. I have reserved from our agreement Hanover and six miles around it in Grafton County, because I thought the physician, whoever he might be in that quarter, should have his chance under the same patronage I gave to others.

I have sent the enclosed form, which is just like the one I interchanged with Dr. Rowe in Vermont, and Doctors Stowe, Ranney and Dr. Billings of Bristol County, Massachusetts and Three Dr. Bartletts [8] in your State, for three seasons with the reserve, that if you

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[7] The bond is mentioned in Spalding's biography but I have not been able to find any existing copies in Washington.

[8] The three Drs. Bartlett are Levi, Josiah and Ezra. They were the sons of Governor Josiah Bartlett (1729-1795), physician, Revolutionary patriot and Signer of the Declaration of Independence, Governor of New Hampshire and Chief Justice of its Supreme Court. He was the father of 12 children, 3 of whom became physicians.

Of the three doctors, Levi was the oldest. Born at Kingston, N. H., 1763. Active as a physician and surgeon, he served also in the State Legislature, was a Colonel in the militia and was a Chief Justice of the Court of Common Pleas and Judge of the Circuit Court. Married twice and had three children by his second wife. He died in 1828.

Josiah Bartlett was born in 1768. Began study of medicine as an apprentice to his

> do not close with my proposals, Portsmouth, Dover, etc., etc., will be included in their district. If you and Dr. Cutter feel disposed to sign such a paper as they have, I will, on receipt of yours, send another properly executed and with it the matter for inoculation.
>
> B. WATERHOUSE.

And finally to make a long story short, Waterhouse for a consideration of $150, the bond being duly executed, sends Spalding a thread on which was the vaccine virus. In his letter dated Sept. 25, 1800, Waterhouse cautions the young man,

(S, p. 58)

> . . . You must be very attentive to collecting the matter from the arm for I cannot supply more than the first thread.

The reader by this time is aware, and it will be noted later in this story, that the matter of a constant supply of vaccine matter was an acute problem in the early days. In fact this uncertainty of supply was probably the chief source of the difficulties attendant on the establishment of vaccination. The first supplies came to this country as lymph dried on bits of thread. These threads of course were not bacteriologically pure and so gave rise quite often to secondary infections. But aside from that not many persons could be vaccinated from one thread. Spalding apparently tried to get a maximum yield from his one thread for he vaccinated thirty patients from his first bit of string. But he soon ran into trouble and Waterhouse replied to his plea for help as follows:

(S, p. 59)

> Cambridge, October 12, 1800 Dear Sir: I write immediately to inform you that you must take the matter from the inoculated part in

---

brother Levi of Kingston. Completed his medical education at Harvard. Began practice of medicine at Stratham in 1789. Sent to Congress in 1810. Served two years. Succeeded Dr. Nathan Smith as president of the New Hampshire Medical Society. Although he was twice married he had no children. Was blinded by cataract and died in 1838.

Ezra was the youngest of the three Bartletts. Born 1770, died 1848.

For further data on the Bartlett family see,

Bartlett, Levi, Geneological and biographical sketches of the Bartlett family in England and America. Lawrence, Geo. S. Merrill, 1876.

Sanderson, John, Biography of the Signers to the Declaration of Independence. Rev. by Rob't T. Conrad. Philadelphia, Thomas Cowperthwaite, 1847.

its limpid state, before purulency comes on and never from the pustules which very rarely occur. I find great difficulty in procuring matter for my own inoculation.

I have had applications from Portsmouth and from its neighborhood and do most strenuously recommend that you offer the matter to Dr. Brackett and Cutter. With their assistance you will make it more profitable to yourself as well as to me. I never was, you know satisfied with our bargain and I never shall be unless those old established practitioners are included. Dr. Jackson has not the matter. He applied to me for it last week. He brought some but failed. In haste, I am, etc. B. WATERHOUSE.

P. S. The febrile symptoms are the criterion.

As is obvious from the above letter, the method used to keep the virus going was arm to arm transfer. A doctor would inoculate a patient and then on the fifth to the eighth day after insertion of the virus he would examine the pustule. If the lymph was clear he would take some of this for his next patient or family group. Direct arm to arm transfer was preferred by the patients as they thus could see that the donor was a "neat, clean person" and they felt more satisfied that they were getting the real stuff. Where direct transfer was not possible, threads were soaked in the lymph, dried and sealed in vials for use. Crusts and scabs were also used. But aside from the obvious danger (obvious to us) arising from material that was not bacteriologically pure, another problem arose. This was an economic one. Since the patient was the source of supply of the virus there arose the problem of controlling the patient. As will be recalled from some of the previous letters, doctors were not above buying vaccine virus from patients vaccinated by another physician. And patients, as human then as now, were not averse to making an "honest" penny when opportunity offered. In the following group of letters, the question of how to control the patient is repeatedly asked. Dr. Spalding's correspondence with Waterhouse was coming to a close and now we find Spalding entering into a correspondence with Dr. Josiah Bartlett of Stratham, New Hampshire. On October 9th, 1800, Bartlett writes to Spalding:

(S, p. 60)

Stratham, October 9th, 1800. Sir: Having no personal acquaintance, yet seeing an advertisement notifying your inoculating with the

varioloid vaccine, I write, wishing to know the Method you take to prevent persons from inoculating with Matter from your patients. From the little experience had in the business as yet I am much pleased with similarity of the Kine, to the Small Pox, three patients having passed through the former under my care with little disturbance except the arms, one having about two hundred pock, but no pustulation, the other a less number. If it will not trouble you too much, I wish you to write and inform me respecting the Matter. With Esteem, your Humble Servant, JOSIAH BARTLETT.

Although the distances were not great between the towns of Portsmouth and Stratham, the mail service must have been excellent for Spalding received Bartlett's letter the day it was sent and he promptly replied and sent a scab from a vaccine pock.

(B) Portsmouth Oct. 9, 1800.

Dear Sir:

Yours of this date is before me. I am happy in becoming acquainted with the physicians in this part of the State; but lament that I cannot give you more, & satisfactory information on the subject of the kine pox. My first inoculation was on the 30th ult. He has had no indisposition, nor eruption, although the arm has been somewhat sore— I have inoculated 15 patients; one, only, has the appearance of eruption— I find some trouble in procuring infection for future inoculations.

All the patients, which I have inoculated, are of the first families in town, & their honor or that of the parent, has been deemed sufficient to prevent any clandestine inoculation. As yet, I have taken nothing but the pledge of honor not to suffer any person to take infection from them. When the lower class of people are inoculated I shall lay them under some obligation not to suffer the infection to be stolen.

Sir, I am with much respect
& esteem, your humble .
Servant

Dr. Bartlett, Stratham LYMAN SPALDING

To this letter Bartlett replied in the following note sent by messenger:

(S, p. 61)

Doctor Bartlett's Compliments to Doctor Spalding, and would inform him that the Kine Pock scab produced a spurious tumor in one case and in others, where inserted, did not take or produce any effect.

If you have some on a thread will you be kind enough to let me have some if you think it is not effete or if it is fresh? Pardon my frequent applications and the trouble I give you. The bearer, George Wingate, Esquire will take the virus to me. Accept my Respects and good wishes, JOSIAH BARTLETT.

And a few days later, Spalding writes again to Bartlett asking for the loan of Jenner's publication on the Kine-pox.

(B) Portsmouth Oct 28th.

Dear Sir:

Having learned that you have a publication on the kine pox (I suppose Jenner) with plates, I must beg the favor of the loan of it for a few days. I find it extremely difficult to determine when the patients are infected. If you will send me this volume by the Exeter stage—it shall be returned very soon with the best thanks of your humble servant L. SPALDING

Can this work be procured in Boston?

Bartlett promptly replies:

(S, p. 61)

Stratham, October 30th, 1800. Dear Sir. Your inquiries concerning Jenner received. Doctor S. Ranney of Brentwood now has the Book. I will endeavor to get and send it to you next week. We could find only this, (one) that we purchased in Boston when visiting Dr. Waterhouse. By a late letter from him I find that the failure within his practice is equal to ours. I frequently inoculate in both arms at the same time; in general, on the 5th day (tho' sometimes not till the 9th or 11th) after effectual inoculation, there is a circular ridge around the puncture, which is pretty certain to produce a good inflammation. We find, that producing a slight irritation by friction on the arm, before inoculation will tend to accelerate the absorbtion of the virus. I wish, Sir, when you write me you would inform me of any symptoms that occur out of the common line in this disease, and we will do the same by you. I am Sir, with Esteem, Your Ob'dt Serv't,

JOSIAH BARTLETT.

and on November 3rd, Bartlett sends out the book with the following letter:

(S, p. 61)

Stratham, November 3d, 1800. Dear Sir. Jenner's publication you herewith will receive. After you have sufficiently perused it, please to return it. The Kine Pox is now inoculated by many Physicians within

our neighborhood, although I believe the Matter was procured in a clandestine manner, and it appears that Dr. Dwight [9] is endeavoring to push himself by inoculating all, indiscriminately. I believe that Doctor Manning [10] has spread the Matter in this State, by way of Newbury. If he received the Matter from Dr. Waterhouse, as I heard that he did, and has spread it (as is reported of him) openly, Dr. Waterhouse ought to be informed of it. I wish you success, and am with Respect, etc., JOSIAH BARTLETT.

Spalding's reply on the 11th follows:

(B) Portsmouth Nov. 11, 1800

Dear Sir: I have to acknowledge your politeness of the 30th ult. & 3rd. inst. & particularly your favouring me with Jenner, which I return herewith.

It is a fact that many physicians are inoculating in our neighborhood—but in what manner Cutter or Dwight procured their infection, I cannot discover—they are silent on this head, as also on every other particular that relates to Kine-pox, you will see that one advertises to inoculate without distinction & the other without discrimination—still I know not what is meant by this—unless it be that they inoculate without a fixed price, taking what they can get from each patient. I have had two cases were [*sic*] erysipalatous inflammation took place about the tenth day & was rather troublesome. I perceive that the temperature of the atmosphere in winter weather, has some effect in making the arms sorer—more than a quarter part of my patients have had eruptions of a vivid red color. Also when the arms are very sore I find chilliness very common. I shall inoculate for the small pox (next spring) some of my patients who have had the Kine-pox. If any of yours desire it they will be cordially received as I have promised my attention gratis.

Sin. yours with due respect

L. SPALDING

After this letter we can no longer follow the story as it developed in Stratham and Portsmouth as no more manuscripts are available.

[9] Dr. Josiah Dwight of Portsmouth. Born 1775 in Connecticut. Came to Portsmouth as a young man and was so impressed by the beauty of the ocean that he settled there for life. Although a general practitioner he officiated at some 6000 births during his lifetime. Was blinded by glaucoma in his seventieth year and died in 1855.

[10] Dr. Samuel Manning (1780-1822) graduated from Harvard and practiced medicine in Cambridge. He was reputed to have received a supply of vaccine virus from Jenner.

But Spalding is not the only correspondent of Josiah Bartlett. He receives two letters from his brother Levi who lives in Kingston, New Hampshire, and we can pick up more of the story from them.

(B) Kingston, Nov. 4, 1800.

Dear Brother:

. . . As to the Kine Pox affair I have not inoculated any since I saw you but expect to inoculate Mr. Peake's family Friday.

I approve the plan of obtaining liberty to sell the matter to other physicians, and shall write to Dr. Waterhouse tomorrow & desire liberty of selling upon conditions to any in this state excepting those places he has previously disposed of; but if he chuses not to grant this—to any in our district upon such conditions as he chuses, as you have not mentioned any conditions.

This I believe is the only way we shall make much money by it & even so after a little time it will not be so lucrative as other practice. . . . I will write you immediately upon receiving a line from Dr. Waterhouse & if he concludes in the affirmative wish you to ride up here & I will send for Stow to proceed as we chuse. I will meet you and Stow after a little time about this affair when you shall think fit and make a business of it.

You will see by the papers that matter is dayly carried from Boston & disbursed to anyone who chuses. Dr. Hunt has been inoculating for the Kine Pox in Boston about three weeks without discrimination, Bond or any other security & anyone can I believe take matter from him but more of this later.

Your Affectionate Brother

L. Bartlett

(B) Kingston Nov. 28 1800

Dear Brother

Last week I rec'd a letter from Dr. Waterhouse dated 10th of Nov. in answer to the one I wrote him wherein he wishes us to explain ourselves more particular " that he will accede to anything that is just, reasonable and liberal " and presents his compliments to you and Dr. Stow. I intended this week to have visited you and taken the letter and a copy of mine, but domestic affairs prevented which is the reason I did not write you sooner and cannot for several days to come, therefore wish you to come up on Thursday if you can or soon to consult with Stow about matters.

I have not inoculated any since I saw you as Dr. Gale is inoculating freely with stuff procured from Dow at Kensington. I this day looked at his Brother Benj's arm who was inoculated 4 days ago, he had the

symptoms the next day after the insertion. The arm is much inflamed and ulcerated discharging largely—but I judge he has not had a symptom of the true Kine Pox. I told him my opinion that it would not secure him from the Small pox, that the infection was nothing more than pus taken from any Phagedenic Ulcer.

Dr. Amos Gate has inserted this into about 20 persons at one dollar per head without any ceremony ••• Knaves invent & Fools believe ••• I doubt whether (Dow, who had his matter from Jacob Kittredge and he from Dwight) any of the matter is of the real Kine Pox, Tilton's, Manning's or any that did not come from Waterhouse. . . .

L. BARTLETT.

These letters speak for themselves on the conditions prevailing. In conclusion I desire to present one final document which is of interest. It will be recalled that the doctors, Spalding and the Bartletts were concerned about methods of controlling their patients and preventing other doctors from having access to the supply of vaccine matter. One method was to bond the patients and such a bond is here reproduced.

It will be noted that it consists of two parts. Part one is a contract among three doctors agreeing on a schedule of fees and the second part is the bond wherein the patients consider themselves bound to Dr. Josiah Bartlett in the sum of $1000, individually and severally, that they will not permit any other doctor to inoculate them or to procure lymph from the pustule.

This is a most interesting document and it would be interesting to know if this bond was ever forfeited and if so under what circumstances. The records of such a suit would make a fascinating bit of medico-legal history.

Although the exact relationship between the two documents is not clear, it would seem that the bond was originally made out by and for Dr. Josiah Bartlett. At a later date, not clear from the document, he was joined by his brother and Dr. Thomas Banning. They agreed on a schedule of fees and pasted this at the head of the bond. I have not been able to determine whether the other doctors and their patients were included in the bond. A transcript of the text follows and the facsimile is on the next page.

(B) Transcript of Bartlett Kine-pox Contract.

Kine-Pox

As the Kine-pox is of very great advantage to mankind we the subscribers do agree to inoculate persons within the circle of our common practice for the following fees.

For one or two in the same house $2.50 per head

For three or more in the same house $2.00 per head

THOMAS S. BANNING[?]
LEVI BARTLETT
JOSIAH BARTLETT

KNOW ALL MEN BY THESE PRESENTS that we the subscribers do individually and severally acknowledge ourselves to stand firmly bound to Josiah Bartlett of Streatham in the county of Rockingham & State of Newhampshire, physician, in the penal sum of one thousand Dollars the which payment will and hereby to be made we bind ourselves our heirs, executors, & administrators firmly by these present, — The condition of the above obligation is that the said Josiah Bartlett is to innoculate the subscribers or some of his or her family with kine-pox & is to attend the same through the disease for which we do covenant & engage to pay the fees as established above and we likewise do engage that no person or persons shall either directly or indirectly receive or procure the matter of said Kine-pox from us or our families excepting the said Josiah Bartlett. Now if we the signers hereof do severally & individually perform the aforesaid engagements then this obligation to be void and of no effect as to the performing person, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF we have hereunto set our hands and seals in the year of our Lord 1800 & 1801

Kine-Pox

As the Kine-pox is of very great advantage to mankind we the Subscribers do agree to inoculate persons within the limits of our common practice for the following Fees Josiah Bartlett
For one or two in the same house $2.00 Josiah Bartlett
for three or more in the same 2.00

Know all Men by these Presents that we the Subscribers do individually & severally acknowledge ourselves to stand firmly Bound to Josiah Bartlett of Stratham in the County of Rockingham & State of Newhampshire Physician in the penal Sum of one thousand Dollars the which Payment well & truely to be made we bind ourselves our heirs executors & administrators firmly by these presents, — The condition of the above obligation is that the said Josiah Bartlett is to innoculate the Subscriber or some of his or her Family with Kine-pox & in case the same shall the disease for which we do covenant & engage to pay the Fees as established above and we likewise do engage that no person or persons shall either Privately

Fig. 1.

Facsimile of fee schedule and contract between physicians and patients regulating the practice of vaccination. [Recto]

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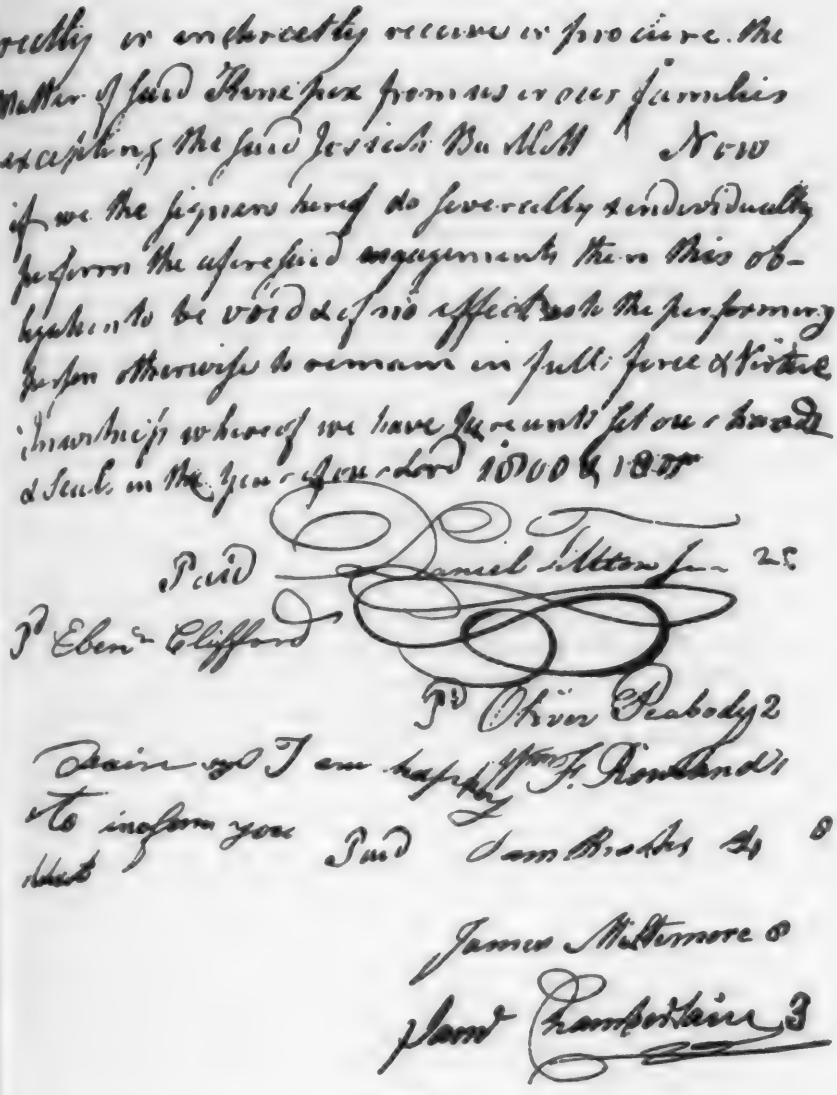

Fig. 2.

Facsimile of fee schedule and contract between physicians and patients regulating the practice of vaccination. [Verso]

We see thus the difficulties under which the pioneer vaccinators in New England labored. The experiences recounted here were not in my opinion confined to New Hampshire. Waterhouse in his writings cites similar instances in Rhode Island. The discovery of new manuscript material from other localities will in all probability confirm the story here recounted. The stabilization of the supply of vaccine lymph did not come until late in the nineteenth century with the introduction of "animal vaccine." In 1842 Negri in Naples began to use lymph from cows and to propagate the matter in these animals. The practice first introduced in Italy spread to France in 1866, Germany and other parts of Europe. A strain of vaccine virus secured from France was introduced into a herd of cows near Boston in 1870 and this was the beginning of the use of calf lymph in the United States.

Acknowledgments

I wish to express my thanks to Mr. W. A. Fletcher of the Historical Records Survey of the Works Progress Administration, who first called my attention to the material in the Bartlett Collection. It is also a pleasure to record my thanks to Dr. St. George L. Sioussat, Chief of the Manuscripts Division of the Library of Congress, and to the members of his staff, for their many courtesies and the manner in which they facilitated my study of this material.

THE PLACE OF THE AMATEUR IN THE WRITING OF MEDICAL HISTORY

W. B. McDANIEL, 2d
Librarian of The College of Physicians of Philadelphia

If I propose, first, that the writing of history is a serious business, it is with the thought not of revealing a dream from God, but of merely laying the central plank of my platform.

Historiography *is* a serious business, I believe, because, like medicine, it is both an art and a science; an art, in that its medium is the written word, with all the power of the word to touch the emotions; a science, in that it is a pursuit after systematic knowledge. The arts have their corpora iurum, and so have the sciences theirs. If the historiographer is to be worthy of the name, he must, therefore, have a working knowledge of the laws both of the art of writing and of the science of historical documentation; he must, of course, in addition have sufficient knowledge of the subject about which he is writing to understand its terms; he must, finally, have the historical knowledge and intellectual capacity that will enable him to interpret, and not merely narrate, his material, if he wishes to exercise the full measure of the historian's prerogatives.

Historiography is also a *dangerous* business, because it responds to a practically universal interest of reflective men; and because, as an inexact science and an unassertive art, the laws of neither of which have been impressed upon us generally, it invites public performance by the amateur.

Most of us, I assume, would characterize an amateur as one whose labors in a given field are not contaminated by a monetary return, but are, as we say, labors of love. Should we not probably recognize in this a survival of the ancient social distinction between the low-caste professional performer and the gentleman amateur; and that its general acceptance has provided the latter with a very effective defense? For, though the social distinction is not so clearly marked today, one essentially vicious privilege that the distinction seems al-

ways to have permitted the amateur remains—that is, a lack of responsibility toward the recognition, maintenance, or improvement, of the best, or any, standards applicable to his field of interest. That is, to my mind, the only real and functional distinction between the amateur and the professional. It is not weakened, in my opinion, by the occasional superiority of an amateur over the majority, or even all, of his professional colleagues; or, conversely, by the admitted presence of many frail or black sheep in the professional fold. One may believe, in other words, that the amateur's freedom from economic bondage to his public puts him in a magnificent position to devote himself to his labor of love with complete purity of motive and practice—and yet be justified in questioning whether, in actuality, it generally works out that way.

But, without probing further in this direction, let us remind ourselves that there are two kinds of amateur: the one who carries on his affair in private; and the other, who makes the public a party to his declarations of affection. The one is as lovable as he is loving, and should be left in the privacy of his choice. It is to the indulgent ears of the other, if he be represented here by any but myself, that these confraternal words are addressed.

Medical historiography, in its best manifestation, is a relatively new discipline, though its basic laws do not differ, of course, from those long enforced on the historiographers of other phases of human development. As a relatively new discipline it has developed so far only a small body of trained, professional workers. On the other hand, a large body of literature on the history of medicine has been published in recent years—obviously, in great part the work of amateurs, technically speaking. The specialized nature of the subject has dictated that these amateurs be, so far, with few exceptions, men whose profession is, or has been, that of medicine itself. Because this situation is both highly desirable, *au fond,* and likely to continue for a long time, it seems to me of first importance that we amateurs, both the majority who are so fortunate as to have medicine as their profession and the few of us on the parasitic fringe, awake to our great responsibility and turn the beady eye of criticism upon ourselves. The appeal of the subject draws us into the writing of medical history; circumstances give us a remarkable opportunity to

do a really important service; common morality seems to me to urge that, if we accept the responsibility, we do so with the intent to fulfill its demands to the best of our ability. One commits no crime in being an amateur. I wonder, however, whether we do not grievously offend when we cease to recognize the potentially delimiting implications of that status and, refusing even the attempt to master the rules of the game, nevertheless ask the attention of our fellows.

One is commonly told, and in moments of desperation is inclined to agree, that there is far too much publication today. If that be true, the reason is obvious: silence is not golden. But the amateur is, as I have said, usually a free agent; he has presumably no direct or indirect economic need to add to the endless sea of printed words. His motive for publication is, indeed, properly suspect, until it becomes apparent that he publishes not for reasons of self-gratification, but because he has something of assured significance, however slight, to contribute.

We have, as I see it, two general ways in which we may hope, if our intentions are honorable, to make some worth-while contribution to this serious business of medical historiography. One is the presentation of unpublished documents, preferably with an interpretation of their general or specific significance, but always with a precise description of the essential details concerning their location and physical characteristics. The other is an interpretation, or a reinterpretation, of material already published, but little known or improperly, in one's opinion, understood.

It might be thought that to most of us the opportunity to work with unpublished documents would seldom present itself. Is it not, rather, true that we are only beginning to become conscious of the fascinating, unwritten history buried in documents accessible to most of us certainly, in hospitals, libraries, our own attics and those of our medical friends and acquaintances—minute books, annual reports and statistics, account books, diaries, letters? These are the very stuff out of which the history of medicine and of society is recreated. There is, it seems to this amateur, a very special pleasure in starting with a document, or group of documents, of this sort and reconstructing from it the combination of circumstances that brought it into being. Do we not stand a chance thereby of adding something,

however minute, to the common store of knowledge and understanding? There is, of course, the danger, once we become document-conscious, of our inflating, say, a single letter [1] of an unknown 18th-century doctor of medicine out of all proportion to its probable significance—and this we must guard against. But it is perhaps better for us to err in this way, than by adding to the serious historiographer's burdens that of looking up what we, the author, very well know is merely another recapitulation of an already thrice-told tale.

If there is much and useful work that we can do in filling in lacunae by the publication and interpretation of unknown or unexploited documents, an equally large field lies open to us in the examination of rare or little-known works; in the re-examination of better-known works from a fresh point of view. Whatever else it is, history is not static, is never definitive. No historiographer has ever written a final history of his subject; because no one could possibly anticipate every point of view from which it might be profitable to regard it, have knowledge of every influence affecting it, or access to all the pertinent material, even if he were able to conceive of what that might comprise. We do well to remember that history, like plays for the theater, is not so much written as re-written. Let us not, however, be so uncritical ever, of ourselves or others, as to confuse the re-writing of history occasioned by the discovery of new material or the application of a genuinely fresh point of view with what is commonly known as the scissors-and-pastepot performance.

Our larger medical libraries are swollen with medical literature that is today unknown. While it may be said that much of it is also well-forgotten, it must also be agreed that much of it would reward systematic study and analysis by competent medical historiographers. I would defy any such to spend a single hour in the stacks of any one of the larger libraries without coming upon a half-dozen items that would stimulate him into the writing of a like number of worthwhile papers. Well, this is perhaps over-optimistic: five of them would certainly have been done, after a fashion; but the sixth would, in all likelihood, be respectably virgin territory.

[1] E. g., W. B. McDaniel, 2d, A Letter from Dr. Williams Smibert, of Boston, to . . . Dr. John Morgan, of Philadelphia, *Annals of Medical History*, 1939, 3d ser., Vol. 1, No. 2 (March), pp. 194-196.

Medical history has, of course, its often-trod fields. These are the dangerous pastures, I believe, because, while the professional historiographer is likely to know and accept the difficulty of making them offer up a new yield, those of us who are amateurs succumb readily to the practices of the parasite. The "professional" (to use the term in a vulgar sense) anniversary biographer and historiographer is a case in point. We all agree that the commemoration of notable anniversaries is an act that enriches our life. But would we not make the occasion one of greater honor, if, instead of paraphrasing what others have said, possibly in simpler language, we were to make it a cardinal principle to re-read the original documents and be stimulated to a new, or at least personal, perception of their quality?

Though from even the oldest and best-known documents there is much to be learned by re-study, this study must inevitably become highly specialized, if one hopes to make his labors of any real use to others. For that reason, it would seem to me advisable for us generally to shun the well-trodden fields for those offering greater likelihood of a profitable return for our modest labor. Those whom the vagaries of fate have left perhaps too-little known to us, whose work has been overlooked or misunderstood, offer an appealing chance to influence in a small way the ever-shifting sands of history. We should not be unmindful of the lesson in this respect which certain studies occasioned by the recent commemoration of Schleiden and Schwann have given us.[2]

As our medium of expression is the written word, one of our primary obligations would seem to be that of cultivating an accurate and clear use of our common language. Too many of us are, in this respect, I am afraid, kinsmen of M. Jourdain: we write prose without knowing it. This is not entirely our fault: the sense of language is not one assiduously cultivated in our increasingly-utilitarian system of education. It is often ruefully observed, for instance, that the average of medical writing, as regards accuracy and flavor, in our country is on a somewhat lower plane than that attained by medical writers reared under what might be called the classical educational system. On the surface this seems a hopeless situation; actually, it is not so. I propose that, if we plan to continue asking the public to

[2] See *Science*, 1939, New ser., Vol. 89, No. 2301 (February 3), p. 108.

read us, we adopt a responsible attitude toward the language and style in which our work is presented. Is it absurd to suggest, in order to be specific, that we resurrect our textbook of the days of English A (it will still be valid), along with it the redoubtable Fowler, and devote to them now and then the final ten minutes of the day's waking hours? The colon is a horrendously fascinating object: too often do we who are interested in medicine seem to forget that there is more than one kind of colon.

Are we, also, as conscientious as we should be about the organization of our material? Historical writing, it seems to me, is hardly the best medium for the "stream of consciousness" technique. However diverse the material we plan to use; however many points we purpose to make; no matter in what order we may have written up different sections, concentrated thought on the organization of the accumulated data may be relied upon to resolve them into a logical pattern, whose progression will immeasurably aid us and our readers, whether the latter be conscious of it or not. Concentrated thought and, I should perhaps add, the strength of character to discard, when we know it to be best, those delightful and interesting details that unfortunately are, as the lawyers say, irrelevant and immaterial.

Apropos of an error in an historical work of his, a distinguished scientist wrote: "It illustrates, however, the dangers of pursuing historical research too far away from the primary sources, and of not applying to these studies the same cautious procedure one employs in the laboratory." [8]

This sensitive and just observation deserves, in my opinion, the attention and respect of us all. The same indifference that we sometimes display toward the laws of language and organization is lavished on the laws of documentation. The amateur medical historiographer, who probably observes scrupulously the laws of documentation in his office or laboratory, too often, I suspect, insults the trained historiographer and others of his critical readers by his casual attitude toward even the rudimentary laws of historical documentation. Here again, I believe, our chief hazard is a mental one—the amateur's normal tendency to take not very seriously what is for

[8] Herbert Silvette, *Annals of Medical History*, 1939, 3d ser., Vol. 1, No. 2 (March), p. 197.

him merely a pleasant occupation for leisure hours. This is Moslem, not Occidental, love-making.

History is not re-created out of thin air, but from definite and tangible sources. These are documents of one sort or another, and we document our work by means of them. As we draw from them, so must we refer the reader back to them. Three principles suggest themselves as possible guides in our use of documentation. The first is that one shall seek to support his brief by collecting the most-nearly complete body of documentary evidence, primary and secondary, that he can put his hands on. It is surprising, as we all know, how often a thorough combing of the literature in historical as, I assume, in scientific writing, will bring our pen to an abrupt halt, or at least save us an embarrassing declaration of our ignorance.

The second principle would advise us to evaluate the respective merits of our documents as carefully and wisely as we can. This requires that we discriminate between evidence that is itself carefully documented by a competent scholar and mere statements carelessly enunciated by a too-casual writer; between, say, an early report and subsequent ones based on later evidence.

The third principle, and the one most-often humiliated, implores us, when we have drawn upon a document very specifically, to quote from or refer to it with the utmost exactitude. A misquotation—even a change of spelling or punctuation, without indication that such a change has been made—would bring upon us, in a thoroughly righteous world, I am sure, a public tarring and feathering. For the maker of a reference that fails to give the potential user accurately every essential detail—and no one is really ignorant of what these skeletal details are—there would be pleasantly prescribed, in all probability, boiling oil. How many times have grievous errors been endlessly perpetuated by an inaccurate or incomplete quotation! Need I do more than refer to the mysterious Dr. O. Uplavici, of Prague, whose troublesome ghost has recently been laid with appropriate, if embarrassing, ceremonies?[4] Think of the tremendous power over good and evil concentrated in, for instance, the simple little word

[4] Clifford Dobell, Dr. O. Uplavici (1887-1938), *Parasitology*, 1938, Vol. 30, No. 2 (June), pp. 239-241; *J. A. M. A.*, 1938, Vol. 111, No. 27 (Dec. 31), p. 2494 (Editorial).

not! Can we blame a serious investigator when he becomes apoplectic at finding, in what is meant to be a reference, the simple statement, "Reprint from the Annals of Medical History,"—with no indication given of the series, volume, or year? Might he not legitimately feel forsaken of all others when, with difficulty, he obtains a periodical-volume to which he has been painstakingly referred, and finds that the article he seeks is nowhere to be found in it, or that it is completely innocent of the statements attributed to it? Irresponsible negligence of this sort, essentially characteristic of the amateur hand, does not necessarily convict us of ignorance of the rules of documentation; but it may very well suggest to the serious reader that we have not thought him or the subject worthy of the labor that doing a job scientifically entails. And I think he could be pardoned for suspecting the validity both of our work and of our motive in doing the job at all.

But there is a way out of these criminal procedures, too—the hard way. When making our original notes we can transcribe accurately and legibly; have foresight enough to put down at the time, accurately, all the essential skeletal details; preserve our notes intact and in order; check every detail faithfully, typescript against notes, galleys against typescript, page-proof against galleys—knowing that even then we cannot win. But our conscience may be at least reasonably clear.

May I suggest, finally, that we do all this laborious detail, including the gathering of our material, ourselves, insofar as that is humanly possible? It seems to me hardly fair—to our readers, to ourselves, to him—to entrust this drudgery of scholarship to an assistant, unless one is assured of his full appreciation of the rites of scholarship. For, if the historical writing that goes out under our name can not show a measure of reliable scholarship, what useful purpose can we possibly expect it to serve?

One can never hope that any story he may tell a medical audience will have the virtue of novelty. Therefore, I set out to do no more than remind you of one of which I am very fond, for the sake of its profound implications as well as its immediate point. It is that of the aged and learned pope who agreed to his cardinals' request that he give them some sign of what he saw as the pearly gates were

opening to receive him.[5] When the time came, you remember, the cardinals were gathered in his chamber, piously suppressing their eagerness to hear the wonderful revelation. At last the pope raised a feeble hand and beckoned to them. They knelt about his bed, and one of them whispered: "Yes, yes, Father, what is it? What do you see?"

The words came out slowly, but there was no mistaking the conviction with which the old pope uttered them: "Always . . . verify . . . your . . . quotations." And these were his last words.

Yes: the writing of history is a serious business. But I think it matters not a whit, as you will have gathered, whether one be an amateur or a professional historiographer. What does matter, and matter very greatly, in my opinion, is the degree of responsible workmanship that we devote to our historical writing. Can we not seek to be everlastingly conscious of the best, and strive toward it, being indifferent not to the honorably ineffective, but only to the wantonly trivial and irresponsible?

I am acutely conscious that I have been didactic in definition and in other statements over which differences of opinion might well exist; conscious that I have probably strained unduly your forbearance while producing a primer with what may have seemed an egregious display of complacency. I suppose it may even be said, as it was of a certain 19th-century medical writer,[6] that I, too, have "rushed in shirtless haste before the public." The only excuse that I can offer is that my time was relatively brief and my heart was full.

[5] As I very well remember that this story (though it is, I hope, one in the public domain) was first told me by Dr. Albert P. Brubaker, there is a pleasant obligation to acknowledge my source. To become really impressed by its significance one must, I believe, hear him tell it.

[6] J. Forsyth Meigs. Cited by Lewis C. Scheffey, The Early Years of the Obstetrical Society of Philadelphia, *Transactions & Studies of the College of Physicians of Philadelphia*, 1938, 4th ser., Vol. 6, No. 2 (September), p. 142.

THE NURSING CAN

An early American infant feeding device

HOWARD DITTRICK

Several years ago I noticed in the historical museum of the Pennsylvania State Capitol, at Harrisburg, a small tin utensil labelled "Nursing Can." Since we had established in the museum of the Cleveland Medical Library a collection of objects for infant feeding, known as the Wyckoff collection, we searched the countryside antique shops for a similar nursing can to add to this exhibit. We could not find anyone who had seen or heard of this device. After many disappointments we finally came upon three in an antique shop in York, Pennsylvania. The shop owner's wife was an obsterical nurse and the nursing cans were her personal property. We persuaded her to part with two. The third having been treated with aluminum paint was less desirable. After further patient search in that same section of Pennsylvania we have succeeded in increasing the collection to nine. No two specimens are alike; each is well preserved and shows the parallel lines of the old block tin from which they were made by hand.

The first specimen (Fig. 1) shown is 10 cm. in height, 6 cm. in diameter at the base, tapering toward the top. A flat handle is soldered to the can. A convex cap is fitted over the top, overlapping to a depth of 1.5 cm. The cover is so well fitted that there is no leakage and the flow of milk is controlled. Furthermore, it is almost impossible for the top to slip off accidentally or to be removed by the infant. There is a spout extending from the side of the can opposite the handle, ending in a rounded knob with a small perforation. Inside the can a vertical cylindrical tube, (Fig. 2) also made of tin, extends to within 1 cm. of the bottom of the can. As seen in cross section, this tube is patent at each extremity. The bottom of the tube is soldered to the side of the can and the upper end is attached to the inner end of the spout, the lumen of which is continuous with that of the tube. The capacity of the can is 170 cc.

Another specimen (Fig. 3) is similar to the first except that the

Fig. 1

inner end of the spout is soldered to the top of the inner cylindrical tube, making an entirely closed channel from the bottom part of the can to the perforation in the spout. Seven other cans have this same type of closed tube. The handle in one specimen (Fig. 4) differs in

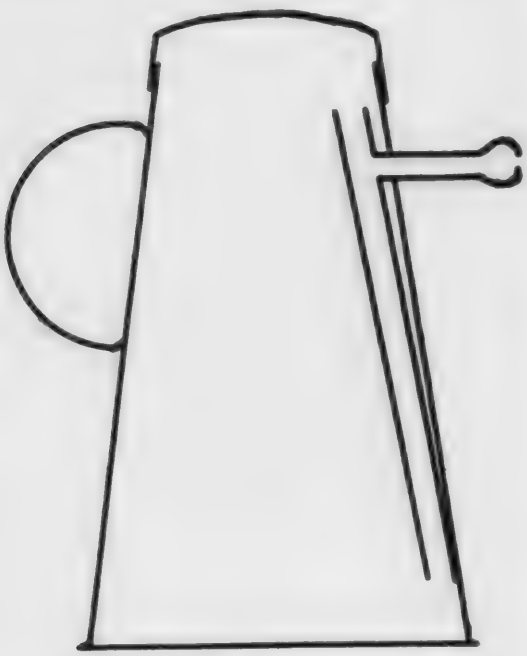

Fig. 2

two features from the others; the first being its position on the side of the can—at a right angle to the horizontal axis of the spout, and the second feature being a raised rib throughout the center of the strap, which adds to both strength and artistry. In several other cans the handle is attached in a similar location. The capacity of this can is 150 cc.

Fig. 3

Some of these cans show very crude construction while others exhibit careful craftsmanship with pleasing lines. Each has some individual characteristic in shape, size or design. The capacity of most of the cans ranges from 150 cc. to 170 cc., but in one unusually large specimen the capacity is 390 cc. Three cans, purchased recently in Ephrata, have hinged covers which can not be removed. This

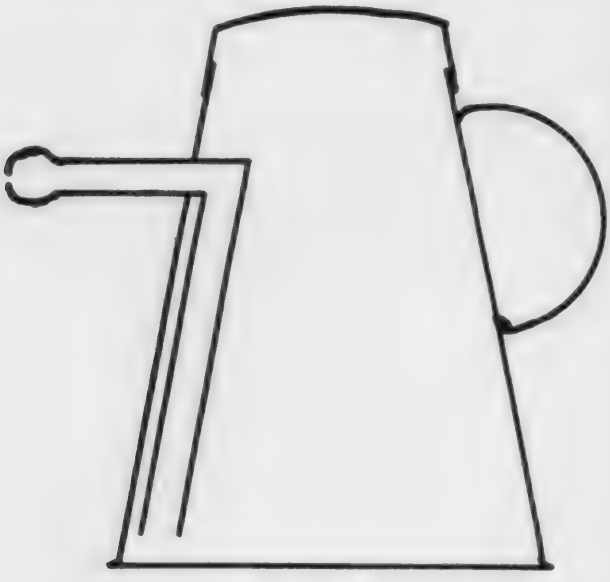

Fig. 4

certainly does not enhance their sanitary value. With so much variety in the appearance of these devices, it seems probable that the plan of the tinner, the preference of the buyer or even a compromise between both, brought about these differences in design.

The Pennsylvania Germans call these cans mammele, the pronunciation being invariable but the spelling uncertain. The suffix may be a corruption of the German diminutive ending *lein*, as in *kindlein*. In southern Germany, especially along the river Main from Bamberg

to Frankfurt, this diminutive *lein* is contracted to *le*, and farther south, and in Switzerland, the *le* is changed into *li*. *Mammale*, or probably better *mammele* (dialect of Lower Francony), or *memily* (Pennsylvania Dutch), means 'little breast' or 'little mother.' The nursing device may be appropriately considered as a 'little breast.' The writer of a letter, which I shall mention later, wrote affectionately of such a can as his 'mammy,' perhaps a further childish contraction for 'mammele' or even a transfer into a term more readily understood by a child.

In these nursing cans you will have noticed the long cylindrical tube and spout which would be almost impossible to keep clean. But other contemporary feeding devices were equally unsanitary. An example of English pewter nursing pot of the XVIII century, now in the Drake collection, (1) is representative of its era. Indeed, as late as 1879, Dr. Jacobi, (2) of New York, introduced from Breslau a glass nursing bottle which he considered an improvement over other existing devices. This bottle had a complicated funnel, valve, and rubber tube, suggesting many possible foci for germ growth.

Interested in tracing the origin of these cans, we corresponded with Mr. H. K. Deisher, antiquarian of the State Museum in Harrisburg. It chanced he himself had been fed from such a nursing can as late as 1868, as he relates in his letter to me. (Fig. 5) He was of the opinion that these cans were brought to America by the German immigrants who had colonized that part of the state, and who had come in the XVIII century from the south of Germany.

Following this lead we wrote to Prof. Sticker of Wurtzburg, who was unable to find any trace of such feeding devices in his locality. He referred us to Grasny of the Landesgewerbemuseum in Stuttgart, who wrote that such nursing cans were unknown in southern Germany. Grasny kindly sent a photograph of three pewter bottles, all conical in shape with pewter nipple screwed over the top. This type of bottle, Grasny says, was in use there from the XVIII century, and was thus the type known and used by the German immigrants before coming to Pennsylvania. These pewter bottles would not seem to have suggested the tin nursing cans subsequently in use among these people in the south-eastern section of that state.

However, many groups of German immigrants had first sought

refuge in England after political and religious persecutions drove them from their homes, then subsequently migrated to Pennsylvania.

Searching for a possible English origin of this type of nursing can, we found some suggestion in the design of the pewter milk-pot made by Hugh Smith, (3) which he described in 1774 as follows:

Harrisburg, Pa. Mar 6- 1935

Dr Howard Dittrick,
Cleveland, Ohio.
Dear Doctor Dittrick:

Supplementing the letter just sent out, it should have been mentioned that most children were nursed at the mothers breast. I was nursed from such a can because my mother became seriously sick after my birth. I stuck to my can for over two years. I lost it in the straw at the barn one day and howled all night for my "mummy" as they were called. This in the years 1867 and 1868.

No other artificial nursing was known at that time in our section of Country — Berks Co, Penna.

Yours very truly
H H Bricker

Fig. 5

"I have contrived a milk-pot for my own nursery upon the above principles. It appears to my family and to many of my patients preferable to those now in use, and may probably be still further improved. . . . This pot is somewhat in form like an urn. It contains a little more than a quarter of a pint; its handle and neck or spout are not unlike those of a coffee pot, except that the neck of this arises from the very bottom of the pot and is very small. In short it is upon the same principle as those gravy-pots which separate the gravy from

the oily fat. The end of the spout is a little raised and forms a roundish knob, somewhat in appearance like a small heart; this is perforated by three or four small holes; a piece of rag is tied loosely over it which serves the child to play with instead of the nipple, and through which, by the infant's sucking, the milk is constantly strained. The child is equally satisfied as it would be by the breast; it never wets him in the least; he is obliged to labor for every drop he receives, in the same manner as when at the breast; and greatly in recommendation of this contrivance the nurses confess it is more convenient than a boat, and that it saves a great deal of trouble in the feeding of an infant; which is the greatest security to parents that their servants will use it when they themselves are not present. The model of this milk-pot is left with Mr. Morrison at the Three Kings in Cheapside for the benefit of the public. The milk-pots are now also made in the Queen's-ware, in order that the poor may be accommodated."

This bubby-pot, as it was called, was in use as late as 1799. One of these bubby-pots is in the Wellcome Museum. Dr. Johnston-Saint, the conservator of that museum, to whom an illustration of the nursing can was sent, writes that during his fifteen years' connection with this museum he has not seen a specimen exactly like it. He believes it to be indigenous to Pennsylvania.

Accounting for the development in tin instead of pewter, it is probable that German refugees learned the use of tin during their sojourn in England, where Cornwall tin had long been in use.

Searching further for origins of tinware in use among American colonists, we found the earliest manufactured tinware for household purposes was sent out from England. Some of the English utensils illustrated in "Home Life in Colonial Days" by Alice Morse Earle, (4) suggest the design and proportion of these nursing cans and have the same type of lids. These utensils were made in England and came lacquered in bright colors. Our specimens show no trace of lacquer.

At a later period, according to Richardson Wright (5) in "Hawkers and Walkers," an enterprising tradesman imported English sheet tin to Connecticut and founded a vast network of pack-peddlar trade in the utensils which he made. Still later he estab-

lished widely separated depots for making the utensils from the more easily transported sheets of tin and some utensils were made on the spot by the tin-smith hawker. These hawkers of tin traded from the Gulf of Mexico to Canada. Dr. Drake of Toronto, Canada, an enthusiastic collector of nursing bottles, had, up to a few years ago, seen no such can, hence we assume their use did not spread to Canada.

Lacking evidence of more widespread use of these cans, we conclude that the German settlers in south-eastern Pennsylvania, remembering from their sojourn in England the general use of tin and perhaps the design of Hugh Smith's bubby-pot, had caused these nursing cans to be made by the itinerant tinkers. Furthermore, we believe that the demand was confined to these German settlers, and that the distribution was made through the travelling tinkers' pack. The result was this tin nursing can or mammele, a feeding device indigenous to this section of Pennsylvania.

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SYPHILIS OF THE CENTER OF THE FACE

FRANKLIN H. CHURCH

It is increasingly necessary to free our thought from the sophistry of the Columbian origin of Syphilis, the disease, which from the beginning of time has exercised the greatest degenerative influence over the development of man and his social institutions. It is impossible to evaluate any phase of man's life, past, present or future, without taking into consideration the syphilis index of the race, people, time era or stage of history in the phenomena under discussion. Just pause for a moment and consider what the present state of civilization of the world would be if the first practical public health law for the exclusion of syphilis from the family had never been promulgated, Moses' commandment, "Thou shalt not commit adultery. . . ." For, I, The Lord, Thy God, am a jealous God, visiting the iniquities of the fathers upon the children unto the third and fourth generation of them that hate me. . . ." The Columbian fallacy has allowed theologians, jurists and philosophers, on the assumption that syphilis did not exist in the Western Hemisphere until after Columbus' sailors brought it back from America, to presuppose that there was no physical explanation for the atypical behaviorisms of paretics before that time. It is much nicer to explain the epilepsies and atypical behavior of Julius Caesar, the decadence of Nero, Caligula and the train of the decadent Caesars (1), the insanities of Cambyses (2), as visitations of the Gods, as "Sacred Diseases," rather than recognize them as the psychoses of syphilitic brains, a train of thought which has not yet disappeared from our cerebration of today. Common sense understanding and consideration have yet to be applied to behaviorism.

Nations have risen and fallen. Civilizations have been built up by laborious effort and then have disappeared from the face of the earth. The "place in the sun" having been attained, races are then overwhelmed by the aftergrowth of uncontrolled decadence. Livy remarks, "Luxuriae origio peregrinae; exercitu Asiatico in urbem invecta est." The love of luxury arises abroad; the Asiatic army was

conquered in the cities. So, with us, the beginning of the importance of Luetic decadence in human and national affairs became evident during the World War, and we are, even now, and may forecast the prospect in the decades to come, visualizing the demoralization caused by this blight spread amongst the nations by War.

Syphilis of the center of the face, so named by Lacapare; the gangosa of the Spaniards, from the sound of the nasal voice; the saddle-back nose of the eighteenth century; the saddle nose of the nineteenth; nasal syphilis; syphilis of the palate. Two and one-half percent of all syphilitics coming to the autopsy table are found to have lesions of the nasal passages (3). These vary from minute changes to enormous destructions of the turbinates, vomer and nasal bones. The entire body of the sphenoid may be sloughed out and death ensue by extension of infection to the meninges. Skulls showing this type of destruction are to be found in all large medical museums and there are plenty of illustrations in the older works on surgery and syphilis. Admiral Butler has many illustrations of the condition in his book, " Syphilis sive Morbus Humanus " (4).

Clinically this is not such a rare condition, either in this country or any other although usually its presence and significance are overlooked. As may be remembered the shape of the nose has had much stress placed upon it in literature and in history and not a little importance has been attached to its configuration by the anthropologists. The appearance of saddle nose is familiar to you and cases with a sunken bridge and a hole in the nose or beside it have probably been seen by many of you. Its presence implies hereditary origin, family background for the condition, as well as, possibly, also an acquired disease.

St. Claire Thompson, writing in the Power-Murphy, Oxford System of Syphilis, (1908), has an extensive description of nasal syphilis, its appearance and pathology (3). He states, " It is well to remember that necrosis in the nose is almost unknown except in connection with syphilis. . . . Hence the discovery of dead bone, and the recognition that it is not a rhinolith, will at once settle the diagnosis. There is no necrosis of bone in malignant disease or leprosy." Perforation of the septum may be made as a primitive custom for wearing feathers or ornaments in the nose or " in simple traumatic

ulcers, lupus, enteric and possibly rheumatism, but in none of these disorders is there destruction of the bony septum.

In Green's *Encyclopedic Dictionary of Medicine*, London, 1917, there is a description of a present day condition in the natives of the Gold Coast colonies in Africa, which describes the primitive type of Yaws-Syphilis nasal destruction (5). It is known as Henpuye, a hideous deformity of the face. "It starts in a native during or soon after an attack of Yaws, in which there is a history of the nasal mucous membrance being attacked, . . . Change is produced by a deposition of new bone under the periosteum on the external aspect of these bones and grows slowly in all directions. Morbid anatomy:—The periosteum strips off readily and under this is a thin sheet of compact bone which appears somewhat rigid on the side toward the periosteum. The whole process appears to be that of a osteoplastic periostitis." With this may be compared the studies of the Navy Medical Corps in the island of Guam for the past forty years.

Dr. Joseph Jones in his "Stone Grave" excavations in Tennessee, 1868 and 1869 (6), found syphilis in a high percentage of the skeletons examined. In one case he relates, "The long bones are strongly marked by syphilitic nodes. . . . The cranium had several indentations and nodes on the bone as if they had been acted on during life by the syphilitic virus. The external table of the frontal bone has been especially affected. The supercillary ridge is very rough and nodulated; and the nasal bones are thickened, roughened and rounded."

Throughout the literature of recorded history, there is to be seen a constant confusion between yaws, leprosy and syphilis. The terms are used indiscriminately and it is only by recognizing the disease from the description that we may, intelligently, identify the plague referred to. Add to this, that most frequently medical interpreters accept the translation of lay students without criticism or knowledge of the real meaning of the essential words involved. A good example of this error is the translation of the word, "Emerods" in II Samuel (7-8). This word originates far back of the historical times in the Bible; original was ophelim, or omphelim . . . , When the Hindu Yogi, thousands of years ago made this sign and said "Om," he was indicating the female. The word Phthallus has come over into

Greek and Latin with the same significance that it has in medicine today. So, instead of Emerods, " They had woman-man diseases on their secret parts," and the context explains itself as an epidemic of sexual diseases and the consequent deaths and misery.

The laboratory can distinguish between leprosy, the Arabian leprosy of Hans Sloan (10) and Bryan Edwards (11) and the Yaws-syphilis treponematosis, but the spirochaetes of Yaws and Syphilis have not yet been differentiated and they give identical serology. They may not be acquired at the same time by humans, nor may they be simultaneously inoculated into laboratory animals. Tissue immunity by either must be lost before reinfection may occur. Probably the most ancient inoculation for disease was the inoculation for Yaws practised by African slaves many centuries before the discovery of America. Bryan Edwards relates, " Clara, a most faithful and well-disposed woman who was brought from the Gold Coast to Jamaica the latter end of 1784, relates that she was born in a village near Anamaboo; that her father and mother and their children (nine in number) were slaves to a great man named Anamoa, on whose death, she, herself, and two of her brothers who also belong to me, with several others of his slaves were sold to pay his debts; that twenty others were killed at his funeral. She informed me also of the remarkable fact that the natives of the Gold Coast give their children the Yaws, (a frightful disorder), by inoculation; and described the manner of performing the operation by making an incision in the thigh and putting in some of the infectious manner. I asked her what benefit they expected from this practise? She answered that by this means their infants had the disorder slightly, and recovered speedily, whereas by catching it at a later time of life, the disease, she said got in the bone; That was her expression."

The Leprosy of the High Priest in Leviticus is a good description of Yaws lesions and was commented on as such in the eighteenth century. As we shall see, the leprosy of the middle ages in Europe was undoubtedly a treponematosis and disappeared from the literature and the Leprosaria as soon as it was recognized as the Venereal Disease, syphilis.

This thought becomes more obvious if we trace syphilis of the center of the face through the medieval literature. The lesion, the

nasal destruction caused by the Yaws—syphilis treponematosis—is perhaps the most ancient lesion described in literature. In the book of Job, oldest and undated book of the old Testament, one has only to read of Job's sufferings to recognize the disease condition. He was, "smitten with sore boils from the crown of his head to the soles of his feet." . . . the primitive Yaws-syphilis combination . . . followed by his nasal syphilis; change in his countenance, foul breath, failure of his friends and servants to recognize him, because "his garment," his face was so changed and "his nights were filled with pain and restlessness. And then in good measure, Zophar adds, "his bones are full of the sin of his youth which shall lie down with him in the dust." There is in Leviticus recognition of this lesion when the law was laid down that, "no man who had a flat nose could become a priest of the Lord."

From the tenth to the fifteenth centuries, medical literature as well as early laws of public health are dominated by the picture of so-called Leprosy. The rules and laws for the control of the "Stews of London" are an example. The Bishop of Winchester had control of that area, formulated the public health laws for the control of the brothels and accepted the perquisites. He made the laws for the control of the prostitutes who suffered from "brennings," as the sexual disease of the times were denominated. A man who had acquired venereal disease was said to have been bitten by a "Winchester goose." Dr. William Beckett (12), writing in the Transactions of the Royal Society (British Philosophical), in 1720, recognized the significance of the nasal lesions as a differentiation between the venereal disease (now called syphilis) and leprosy. He was a contemporary of Sir Hans Sloan and Mr. Halley of comet fame. Dr. Beckett quotes from a manuscript of Bartholomew Glanville who wrote in Latin in 1360 and was translated into English of John Trevisa in 1398. . . . "Some leprous persons have reddish pymples and Whelkes in the face, out of whomme oftenne runne blood and matter; in such the noses swellen and ben grete; the virtue of smellynge fayleth; and the breethe stynketh right fowle . . . unciene, spatyd, glemy and guttery, the nosethrilles ben stapyl; the wasen of the voyce is rough and the voyce is horse and the hair falls."

Glanville continues, " Among the causes of this kind of Leprosy are, lying in the sheets after them; eating nature after them; it comyth of fleshly lyking by a woman, after that a leprous man hathe laye with her; also comyth of Fader and Moder; and so this contagion passyth into the chylde, as it were by lawe of Herytage . . . and also when a chylde is fed wythe corrupte mylke of a leprous nouryce. . . . " Captain Holcomb tells me that he has seen some of these manuscripts and that Dr. Beckett correctly quotes them. As leprosy is neither transferred by sexual intercourse nor by heredity, little doubt is left as to what the disease was that Glanville was describing in the fourteenth century.

At the time Dr. Beckett was writing, the falling of the nose, nasal syphilis—Yaws, was recognized as belonging to the venereal disease complex and he then goes on to show how the lesion was described in the lepers. Rules were laid down in the ancient literature to determine who had the leprosy before they were quarantined in the method then used. There were three examiners and some of the rules for the diagnosis are described in the records of that time: . . . " Then ought ye to enquire, If there were any of his lygnage that he knew to be Lazares and especially their Faders and Moders; for by any other of their kynred they ought not to be Lazares; then ought Ye to enquire yf he hathe had the company of any Lepress Woman; and yf any Lazare had meddled with her afore him; and lately because of the infect matter and contagyous filth she had received of him. Also his noisthrilles by wyde outward, narrow within and gnawn; also yf his lippes and gummes are foul stynking and corroded. Also yf his voyce be horse and as he speaketh in his nose."

An old Latin Surgery stated concerning the diagnosis of Leprosy, " Si nares exterius secundem exteriorem partem in grossentur, et interius constringantur et coarctentur. Sergundo, si apareat cartilagio in medio corrosio et casus ejus significat Lepram incurabilem."

John Gadisden in his " Rosa Anglica " dated about 1340, remarks about Leprosy, " Confirmationis etiam incurabiliter sunt corrosio cartilaginis quae est inter foramina et casua idem."

In another communication to the British Royal Society, Dr. Beckett (13) has some remarks to make as to the antiquity of

Figure 1.

Cancer of the Nose.

Figure 2.

Cancer of the Nose.

"leprosy" and so of Syphilis in England before the Crusades." "... the first Englishmen that went over to the Holy War, made their voyage in the year 1096, as our historians generally agree and that some of them returned in 1098, two years after that expedition; but most certain it is, we had the leprosy among us before, for Wharton, de Episcopis Londinensibus, and other historians assure us, that Hugo de Orivalle, one of the Bishops of London, died here of Leprosy in the year 1084, which proves our Countrymen did not bring that disease first from the Holy War, because we had it among us before. The account William of Malmesbury gives of this Bishop's disease, is as follows: 'Is post paucos ordinationis annos in morbum incurabilem incidit. Siquidem regia Valetudo totem corpus; ejus purulentis ulceribus occupans ad pudendum remedium transmisit. Nam credens afferentibus unicum fore subsidium vasa humorum receptacula, verenda scilicit, exsecantur, non abnuit. Itaque et opprobrium spadonis tulit Episcopis, et nullam invenit remedium, quoad vixit leprosus.' Now it is highly probably, had this been a new disease the Bishop died of, the mention of it as such, would not have escaped our historians, but on the contrary it seems to have been anciently known among us, because the Remedy made use of for it was so, it having been recommended by Aetius, and other physical writers several hundred years before this time; and I think it is very plain that the cutting off of the Testicles, and with them the vessels formed for receiving the Humors as expressed in the former case, was by them looked upon to be of peculiar service, because it is possible that observing the disease to begin in these and the neighboring parts, they thought the very Minera Morbis would be by this means destroyed, and the Disease either cured or the spreading of it prevented." Apparently the castration and removal of the parts in the cases of this kind of leprosy was a forerunner of the custom in vogue a few years ago both in this country and abroad of excision of the chancer in attempting to cure syphilis; a procedure of doubtful value and not in use at this time.

To the lore of this interesting, ubiquitous and ancient lesion of syphilis, syphilis of the center of the face, radiology may now add a chapter. As may be expected, in the X-ray the lesion demonstrates itself as a loss of bony substance, turbinates, vomer, hard palate and

the bony markings of sinuses, ethmoid or sphenoid cells depending upon the location and extent of the lesion, the severity of the process and at what time in its course treatment was instituted.

The first case is that of an old man who was treated for cancer of the left ala nasi. The soft parts are gone and there is a hole beside the nose which exposes the inferior turbinate and the mucous membrane. In the radiograph, Figure 1, we see that the bony parts are not involved and that the position of the vomer, the turbinates are quite normal and the bony markings of the sinuses, ethmoid cells and sphenoids are also normal. The side view is shown in Figure 2 and again the appearance of the X-ray will serve as a standard. The cancer of the nose has caused no bone destruction and there is no evidence of any new bone formation.

The second case is that of a white woman in her sixth decade who has suffered from Syphilis of the center of the face for some thirty-five years. She was first attacked while carrying her first child and was told at a good Hospital Clinic that she was suffering from "consumption of the throat" but a physician in Virginia told her later, probably trained by more experience among the negroes, that she had "inherited something" which was causing her this trouble. She has borne seven living children; has never had positive serology; now is bedridden at sixty with incurable Tabes Dorsalis. She has had children who have positive serology and in one case the son probably infected his wife and they also have five children. In the Antero-posterior X-ray, Figure 3, the loss of bony tissue in the center of the face is noticeable. The outline of the ethmoids is lost; the vomer is twisted to one side and shows a little proliferation of bone; the hole in the hard palate is seen filled with the denture. She healed her original lesion but was left with a hole in her hard palate about the size of a quarter and the posterior pharyngeal-nasal passage is filled with scar tissue through which is a small contracted orifice. In Figure 4, is the lateral view of the same lesion. The usual markings are lost; the nasal orifice is seen surrounded by a little new bone proliferation while the shadow of the sunken and turned up nose may be made out. Her voice sounds extremely nasal in quality and without her denture she can scarcely make herself understood.

Figure 5 is the anterior view in radiograph of the head of one

Figure 3.

Syphilis of the Center of the Face

Figure 4.

Syphilis of the Center of the Face

Figure 5.

Mummy Jehap, IVth Century B. C. Syphilis of the Center of the Face.

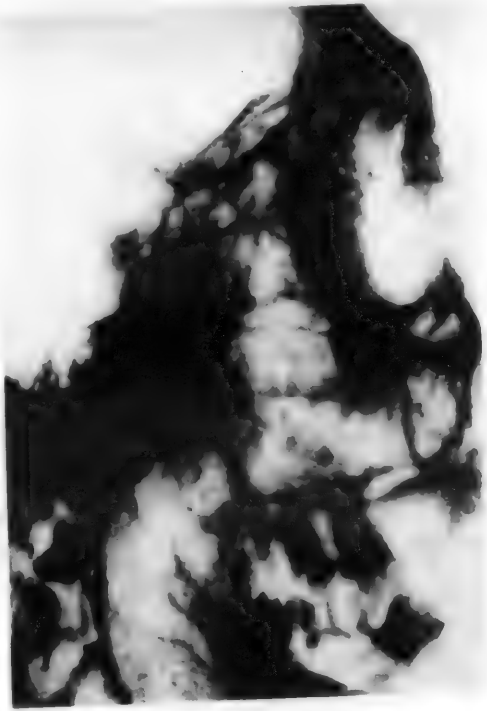

Figure 6.

Mummy Jehap, IVth Century B. C. Syphilis of the Center of the Face.

Jehap, a mummy on exhibition at the University Museum in Philadelphia. About a hundred radiographs of the University Museum's fourteen Egyptian Mummies were made by Dr. Jacob Gershon-Cohen in 1932 as a study of teeth and their development. This

Figure 7.

Mummy Hapimen. Did not have syphilis of the center of the face.

mummy is dated by the Egyptologists as of a period about 350 B. C. In this picture we see again the loss of bone in the center of the face and the destruction seems to have been quite considerable. In the lateral view, Figure 6, there is seen loss of bony substance, of the usual markings of the side walls and more than a suggestion of

destruction of the hard palate. There is a ring of new bone proliferation about the nasal orifice and a considerable deposit in the floors of the orbits. This change indicates that the process occurred during the life of the individual.

In Figure 7, we have an antero-posterior view of the skull of Hapimen, mummy of a man who lived about the first century A. D. In this is seen the usual shadows of the normal vomer, turbinates ethmoids and sinuses and is included for comparison.

The ancient Egyptians when carrying out the process of embalming as has been related by Herodotus, removed the brains from the bodies by making an opening below the palate in the back of the throat, withdrawing the brain tissues with instruments and then introducing their preservative chemicals through this opening. Fragment of such materials are frequently seen in the radiographs but the openings are much lower in the pictures than the nasal bones and do not show at the level of the palate.

Syphilis of the center of the face is a lesion of that disease, rare but not uncommon; easily identified, either in life, in the skull or in the radiograph. There is unmistakable bone changes which are never seen either in leprosy or cancer. It may also be easily identified by its description in the lay literature, in living patients, mummies or skulls. In a recent article by Dr. Harry Bernard Wright (14), there is published an illustration of a Peruvian mummy which shows an unquestionable picture of syphilis of the center of the face. The age of the mummy is, probably, untraceable. This lesion may be found in any country, race or people and at any age or period, provided a sufficient number of specimens are examined to reach the disease incidence. In this country, at the present time, I should estimate, depending on the section of the country, the frequency of the condition is about one in ten thousand individuals as easily recognizable cases. Hence, it is very likely that many thousand skulls would have to be examined before any suggestion of the absence of this lesion in a given race or tribe would have any validity.

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THE HIPPOCRATIC OATH IN REFERENCE TO LITHOTOMY

A New Interpretation With Historical Notes on Castration *

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The paragraph referring to lithotomy in the Hippocratic oath, οὐ τεμέω δὲ οὐδὲ μὴν λιθιῶντας, ἐκχωρήσω δὲ ἐργάτῃσιν ἀνδράσι πρήξιος τῆσδε, is one of the most confusing in all classical literature. It is generally assumed that the oath forbids performance of lithotomy, and two justifications prevail for this injunction. One is that the operation was in most instances fatal and was therefore delegated to another expert group. The other is that the oath indicates the beginning of specialization in Greek medicine as already existed in Egypt.

The first theory, in my opinion, is absurd and blasphemous. Why should the Hippocratic physician who performed routinely pleurectomies, amputations, drainage of lung and liver abscesses, trephenings of the skull etc., relegate his lithotomies to another group of practitioners, of whose school and even very existence, we know nothing? The theory that Greek medicine was divided into many branches merits no serious consideration. Herodotus, a contemporary of Hippocrates, despite his fondness for Egypt and things Egyptian, displays surprise that medicine was divided into so many branches there.[1]

That the paragraph might refer to castration was considered possible and Littré thought of changing λιθιῶντας to αἰτέοντας but he was reluctant, in view of the unanimity of all MSS. Others previously suggested various amendments to the text but they all seemed to stumble on the second clause of the paragraph.

After a careful perusal of the text it appeared to me that this paragraph was never given sufficient grammatical and linguistic con-

* This paper presents a preliminary report. A more lengthy and detailed discussion of all points touched upon here, will be published very shortly.

[1] Herod., 2, 84.

sideration. Instead, a meaning was assumed and explanations for such an injunction, based on totally imaginary or at the most, thinly historical grounds, were sought afterwards. The translation as generally accepted is not correct grammatically. Οὐδὲ always means "not even." The affirmative μὴν does not, in any way, change its meaning to "indeed not," or "certainly not," as all translators use it. A linguistically correct translation of the first clause of the paragraph then is: "I will not cut, indeed not even sufferers from stone." Accordingly the whole field of surgery, and not lithotomy alone, would seem to be forbidden. But if this is the correct translation, what is the meaning and justification of the second part of the paragraph?

The verb ἐκχωρέειν syntactically is probably the most peculiar of all the verbs of the Greek grammar. It is found, with or without the preposition ἐκ, as transitive or intransitive, with the object in the genitive, dative or accusative, or with more than one object in any combination of cases, and this not always according to the meaning it conveys. In our text the verb takes one object in the dative case ἐργάτῃσιν ἀνδράσι, the πρήξιος τῇσδε being appositive to the object. The verb has several meanings closely related to each other. It is known that the original meaning of any composite word was that conveyed by its component parts, but later this was expanded to cover situations and conceptions closely related to, or resulting from the original and, at first, unique meaning. Ἐκ means of course, "out," χωρέειν (χῶρος "space," "room"), means "proceed (in space)," "move." Ἐκχωρέειν then means "move out and away," "separate." If someone moves out, someone else takes his place; hence the second meaning, "give way," "make room." And from this another meaning results, "turn over," "cede," "grant."

Of these closely related meanings which is the most probable in our text? That it should mean "turn over," or "make room" is improbable and unreasonable. If the verb here means "separate," the presence of the preposition ἐκ, commonly in this sense, requires the object in the genitive case. When without the preposition, the verb may take a dative, even in meaning of separation. Γεραιᾷ δ' ἐκποδὼν χωρήσομαι Ἑκάβῃ.[2] "I will get out of ancient Hecuba's way."

[2] Eurip., Hecuba, 52.

Ἐγὼ γὰρ ἀσφαλῶς ἐμαυτὸν φυλάξω χωρήσας αὐτοῖς ὁμόσε.[3] " I will keep myself in security separating and keeping myself apart of them all." Τῷ μ' οὔ τις Δαναῶν νεμεσήσεται, ὅς κεν ἴδηται // Ἕκτορι χωρήσαντ', ἐπεὶ ἐκ θεόφιν πολεμίζει.[4] " Therefore no one of the Greeks will be vexed at me, seeing me run away from Hector, for he is fighting from the god (animated by the god)."

That this might be the meaning of the verb in this case, despite the difficulty of the presence of the preposition ἐκ, is supported from a marginal note on one of the MSS of the Bibliothèque Nationale which Littré mentions but passes without comment: " Ἐκχωρήσω ἀντὶ τοῦ ἀποστήσομαι, αἰτιατικόν· ἐκχωρήσειν δὲ λέγεται . . . . . (illegible words) . . . . . ἐκ τοῦ θρόνου." Ἀποστήσομαι is the future tense of the middle voice of the verb ἀφίστημι which means primarily " stand off," " keep off," " stand aloof "; and hence " revolt," (– ἐκ τοῦ θρόνου?). So then, in the mind of at least one commentator, ἐκχωρήσειν is an αἰτιατικόν, meaning " occasioning," implying accusation, " chargable " (in bad sense).

According to these comments an accurate translation of the whole paragraph must be: " I will not cut, indeed not even sufferers from stone, and (δὲ) I will keep apart from men engaging in this deed." Since neither lithotomy in particular, nor surgery in general could be forbidden, the injunction must refer to an abomination, such as castration was considered among the Greeks, since τέμνειν means also " to castrate."

But did surgeons ever castrate their patients for any cause, or in the process of an operation for lithiasis, and, have there been men practicing castration as a means of earning a livelihood?

Lithiasis today, in Western society, is a much rarer condition. It must have been more frequent as late as the seventeenth century, according to the impression one gains by reading the literature of the time. Certainly it is more frequent today in the Near East and especially in the Far East, where, according to missionaries lithiasis among children in China is as high as 50%. This is very interesting, for according to Hippocrates,[5] Aretaeos [6] and Paul of Aegina [7]

[3] Galen, Ad Posthum., 4, 445.
[4] Ilias, XVII, 100-101.
[5] Hippocr., On the Nature of Man, 12.
[6] Aretaeos, On Chronic Diseas. (On the kidneys), 2, 3.
[7] Paul Aeginita, 60 (On Lithiasis).

lithiasis of the bladder was much more frequent among children than among adults.

A condition as frequent as lithiasis of the bladder certainly required much attention from the art of the physician and instruments were invented for locating the stone in the bladder. Hippocrates [8] states that one of the most unfortunate situations in surgery is " introducing a catheter, not to be able to reach the bladder or reaching it, not to be able to locate the stone." Who can then seriously contend that the ethical surgeon who performed these diagnostic investigations was afraid or unqualified, or still more absurd, prevented by an oral oath and a written contract to practise such an operation, and was forced to leave it to irregular practitioners?

The first description of the operation for lithotomy coming to us, that of Celsus,[9] dates from the first century of the Christian era. However we know that Celsus was copying from an earlier Greek source. Galen's curt and casual description [10] and Aretaeos " [11] comments on its results, indicate an operation routinely and frequently performed then by the best representatives of the Hippocratic school.

That many untowards results followed such a procedure is natural. According to Aretaeos,[12] the small stones may be cut without danger, but in the case of the larger ones, since the surgeon had to cut also " the thin part of the vesicle," death frequently occured on the same day of the operation, or, if the patient survived the day, he " melted in agony, pains and fevers," dying a few days later. If the patient escaped death, the resulting fistula made life unbearable and unbecoming for a freeman. Oreibasios [13] also states that the urinary fistula results when the " thin part " of the bladder is cut, or when the neck of the bladder is " removed by a round excision." (περιαιρεθέντος). We may be sure that the fistula was not the only complication.

[8] Hipp., First Book on Maladies, 6.
[9] Celsus, VII, 3.
[10] Galen, Introd. or Medic., 389.
[11] Aretaeos, Chron. Diseas. (Bladder), 2, 4.
[12] Ibid.
[13] Oreibasios, On Urinary Fistula, 50, 4.

Recently Dorman [14] called attention to necrosis of the testicles following operation on the neck of the bladder, and concluded that the complication is much more frequent than it is indicated in the literature. The only reference he could find was that of Keyes, who however does not mention the mechanics of its development. Dorman states that the necrosis results from occlusion of the blood supply of the spermatic artery which may be produced by 1) external pressure such as tight suspensory or bandage; 2) by internal pressure produced by torsion, infarct or inflammatory process within or around the spermatic artery.

Since lithiasis in ancient times was so prevalent, and the only relief for the condition was cutting on the neck of the bladder, one may readily see, in view of the surgeon's vague anatomical knowledge of the region, how frequently necrosis of the testicle must have followed lithotomies. And if the aim of the surgeon was to reach and incise the neck of the bladder, would it not have been easier to remove beforehand the interfering external genitalia, since probably in most cases, following the operation, necrosis resulted anyway? Does Oreibasios' "round excision" of the neck of the bladder refer to such a procedure? We know that physicians castrated men as a curative or preventive measure in certain diseases, but lithiasis is not mentioned as one of them. Castration by total ablation was widely performed with fairly good results, as regards mortality, and it is very probable that in the presence of a very large stone, the absence of the penis would have simplified the operation, as in women.

Review of History of Castration

Castration seems to have been the most frequently performed operation on humans in ancient times. It seems to have been originated in Babylon by the legendary Semiramis. The Lydians adapted the custom and the Persians in their turn imitated them. From Persia it was introduced into Egypt and from there into Greece, where, however, the custom never found favor, and from Greece into Rome. Disregarding mythological accounts of castration of gods etc., the first mention in Greek literature of an estab-

[14] Dorman, H. N.: Necrosis of the Testicle. Report of eight cases following surgery of the vesical neck. Urol. & Cutan. Rev.: 42: 343, May, 1938.

lishment where men were sent for castration is in the Odyssey where Antinoos threatened to send Iros " to the mainland to king Echetos, the bane of all mankind, who will cut off your ears and nose with his ruthless sword and tear off your private parts to give them raw to dogs to eat." [15] Mutilations of any sort as punishment are not mentioned in the Homeric poems as performed by the Greeks, and these verses show sufficiently not only the abhorrence of the Homeric society for the deed, but also the lack, I think, of castrators in Greece, although the sinister fame of barbarian mutilators was known. Even four centuries later, when the Corynthian tyrant Periander wanted to castrate three hundred Corcyrian boys as punishment for their parents who killed his son Lykophron, he had to send them to the Mede Alyattis, in far away Sardis.[16]

During the classical period such establishments, if they existed in Greece, operated only for the barbarian trade. We know from Herodotus of one Panionios of Chios who, according to our historian, " made his living from a most unholy trade. Whenever he came into possession of boys with good looks he castrated them and bringing them to Sardis and Ephesus sold them for a good price. For among the barbarians, eunuchs are higher priced than non-castrates." Eventually Panionios fell into the hands of one of his victims who forced him to castrate his own four sons and then the sons to castrate their father.[17] The mortality could not have been very high, otherwise the business would not have been very profitable.

In Rome the institution fared much better. Rome imitated with the arts the vices of Greece and adopted them all to the peculiar pattern of graeco-barbarism, known as Roman culture. As everything else, even homosexuality and eunuchism were displayed with splendor and pomp, and in a manner so vulgar that it never had a counterpart in any civilized or barbarian state. During the time of the Empire all laws of decency were abolished and Caesar, Octavius, Tiberius, Caligula, Nero, Elagabalus etc. made their active and

[15] Πέμψω σ' ἠπειρόν δε, βαλὼν ἐν νηὶ μελαίνῃ
εἰς Ἔχετον βασιλῆα, βροτῶν δηλήμονα πάντων,
ὅς κ' ἀπὸ ῥίνα τάμῃσι καὶ οὔατα νηλέι χαλκῷ
μήδεά τ' ἐξερύσας δώῃ κυσὶν ὠμὰ δάσασθαι.
Odyssey, XVIII, 84-87.

[16] Herod., 2, 48.

[17] Herod., 8, 103 seq.

passive orgies the public spectacles of Rome. Following the example of their aristocracy, the people adopted the vices so thoroughly that it was alleged that during their ritualistic orgies "plura virorum inter sese quam feminarum esse stubra." [18] As homosexuality was more and more generalized, eunuchs became more and more popular and filled not only the Imperial Palace but the homes of the aristocracy and the rich. They became an indispensable part of the household of rich matrons whose position in society was gauged by the numbers of eunuchs accompanying them to the promenades, baths etc. Competition increased their numbers and the perversion of their husbands caused the women who were left alone, to turn to the eunuchs for their sexual pleasures. Very soon they discovered that if the testicles were removed from a youth, soon after puberty had been established, he was capable of coition but not of fecundation, and besides not having to bother with abortions, the absence of the beard made their kisses more delicious, according to the Satirist.[19] The accusations of the satirists, from Catullus and Juvenal to Martial, are sustained by the historians, and the pages of Dion Cassius, Suetonius, Livy and even St. Basil later, astonish and shock the classic reader.

All these various factors stimulated the manufacture of eunuchs to an alarming degree and early legislators sought to put a stop to the abominable practice. The Cornelian law punished those who castrated boys for immoral purposes. The Aquilian law forbade the castration of slaves belonging to others. Domitian promulgated the first general edict: "castrati mares vetuit," although Dion Cassius accuses the Emperor of being motivated by hate for his brother Titus, whose passion for castrates was notorious. Nerva confirmed this law by a decree and later Hadrian punished by confiscation of his patrimony the man who delivered his slave for castration, and imposed the penalty of death on the castrator,[20] and this was later confirmed by Constantine.[21] Justinian modified the penalty of death by the penalty of talion, and deportation with confiscation of his property. He justified these cruel measures by remarking that only three out of every ninety survived the operation.[22] This either

[18] Livy, 39, 13.
[19] Juvenal, 6, 366-367.
[20] Digest., 48, 8.
[21] Codex., 4, 42.
[22] Novel 142.

indicates an exaggeration or the decadence of the art of the castrator, since we have no allusion to such frightful mortality by previous writers. The last modification of the Roman law was by Leon,[23] according to which, "those practising the operation on a slave," should be attached to the Imperial House. In all other cases the operator was whipped, fined and exiled. Naturally the operation was forbidden only "in orbe Romano," and nothing prevented castration in other lands and importation of such slaves. Constantine's son, Constantius as a child was educated, and later as Emperor, ruled by eunuchs. When Constantius' successor, the plain soldier Julian reached Constantinople, after being proclaimed Emperor, he found in the palace "more eunuchs than the flies among the shepherds in summer." [24]

Castration for immoral or commercial purposes was usually carried out by special practitioners, called magnones, in Rome. But probably the "regular" physician performed at times castrations for some "legitimate" cause, and references or allusions to such instances are not confined to the satirists only.[25] Thucydides states that during the great plague the disease "descended to the genitalia and the extremities of the hands and feet, and many escaped death by loss of these parts." [26] Since gangrene would have killed the patient, the speculation is left open that the loss was affected by surgical intervention, and there is sufficient justification to believe that this was done in some cases as a measure of prevention. This opinion seems to find support in Lucretius who describes the plague thus:

> "Profluvium porro qui taetri sanguinis acre
> exierat, tamen in nervos huic morbus et artus
> ibat et in partis genitalis corporis ipsas.
> Et graviter partim metuentes limina leti
> vivebant ferro privati parte virili." [27]

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[23] Novel 60.

[24] Libanius, Orat. Parent., C, 62. Quoted by Gibbon in Decline and Fall of the Roman Empire, ch. 22.

[25] Curandum penem commisit Baccara Graecus
Rivali medico: Baccara Gallus erit.
Mart., Epig., XI, 124.

[26] *Κατέσκηπτε γὰρ ἐς αἰδοῖα καὶ ἐς ἄκρας χεῖρας καὶ πόδας, καὶ πολλοὶ στερισκόμενοι τούτων διέφευγον.* Thucydides, 2, 49.

[27] "Again when a man had escaped this fiery outpouring of corrupt blood, yet the

According to Hippocrates [28] and Aristotle [29] eunuchs did not suffer from gout or varicosities, but neither advised directly castration as a possible therapeutic or preventive measure. Indeed allusions to castration for "legitimate" reasons are not very numerous, even in the lay writings, but the number of such unfortunates must have been so impressive during the early Christian period, that the First Ecumenical Council of Nice made provision in its first Canon to permit holy orders to a man "if he had been castrated by a physician on account of illness."

During the middle ages castration was advocated for the cure or prevention of almost all diseases, and even up to very recently castration has been performed in first class hospitals for the cure of epilepsy. But it was for the prevention and cure of hernia that castration found widespread application in post-Renaissance Europe. The general opinion that the "soprani," the castrate singers of the churches of Rome, did not suffer from hernia, and the ignorance of the anatomy and physiology of the testicle, promoted the idea of wholesale castration of young boys. The abuse reached alarming proportions during the 18th century, when castrators competed with each other as to the number of their victims. One of them in the city of Breslau alone, castrated 200 individuals and another boasted of feeding his enormous dog exclusively with human testicles he himself removed.[30]

Although castration for commercial, immoral or prophylactic reasons seems to have disappeared from the civilized world, penal castration fared better. It began in ancient Egypt and China, where it is first mentioned in the 11th century, and continues to be present today in the United States and Germany, although it is no longer referred to as punitive castration but as "sterilization" for "crime prevention" or "race purification." That contemporary organized medicine has had to do with the promulgation of these laws is, in my opinion, the more deplorable.

disease would make its way into the sinews and limbs, and even the very genital parts of the body. And some in heavy fear of the threshold of death, lived on deprived of their virile parts by the knife." Lucret., De Rerum Natura, VI, 1205.

[28] Hipp., Aphorisms, 6, 28.

[29] Arist., Probl., 10, 37 and 57.

[30] Quoted by Millant, R., Les Eunuques à travers les Âges, Paris, Vigot Prères, 1908.

Conclusions

Although the proposed new interpretation of the paragraph in question is based primarily on grammatical and etymological reasons, such an interpretation is also logical. For if lithiasis was prevalent, and instruments were invented for locating the stone in the bladder, lithotomy must have been practised extensively. Celsus copied from an earlier Greek source, and Galen's and Aretaeos' comments suggest a commonly performed operation by the physician of the Hippocratic school, not by cultists. Castration, on the other hand, was not performed for criminal, punitive, immoral and commercial purposes only, but also, probably, practised for the cure and prevention of diseases. Lithiasis is not mentioned directly by any writer as one of the diseases preventable by castration, and I do not argue here that this cure was practised by the physicians of the Hippocratic school. But that the operation might have been performed by some physicians is possible, and it is unquestionable that at times, castration was frequently an undesirable complication of lithotomy. The resulting fistula rendered the man incapable of coition possibly, and of fecundation certainly; and either condition was synonymous to eunuchism in Greek.

The student of Greek medicine should not forget that the physician's liability in Greek society was only a moral one. He was free to use or abuse his judgement in all cases, without legal restrictions. Laws penalizing the physician and awarding damages to the patient or his family did not exist; and the barbarian prince who impaled, dismembered or beheaded the physician who failed in his efforts, had no place in Greek society, the only bridle in all matters being the physician's own conscience.

But aside from offenses of malpractice there were moral offences, easier to be committed, then as now, by the members of a privileged profession. The Oath attempted to formulate these essential moral obligations of the physician and prevent the outright practice of an abominable operation, or the wanton mutilation of the unfortunate sufferer from lithiasis. Indeed it would seem utterly unreasonable if the author of this lofty document, preceding and following injunctions concerning morals, inserted a clause referring only to fraternal courtesy and good manners.

THE IDEOLOGICAL BASIS OF DISCOVERY

IAGO GALDSTON

I take as my texts two widely divergent citations. One is from the writings of Charles Singer, the other is from an address by Sigerist. Singer (1), in a contribution on the early history of the microscope, makes note of the following facts. The earliest microscopical observation known is that of Seneca (2). "Letters small and dim," wrote Seneca, "are comparatively large and distinct when seen through a glass globe filled with water."

> Spectacles were invented circa 1300,
> Leonardo da Vinci (1452-1514) investigated the optical properties of lenses, and
> Maurolico (1494-1575) studied them with mathematical skill.

Singer then observes, "It is yet an extraordinary fact, and *one which requires further explanation*,* that there is no single instance on record of these glasses having been used for the investigation of nature."

Sigerist (3), from whom I draw the second citation, in an address on The Historical Development of the Pathology and Therapy of Cancer, made the following statements. "I personally have the feeling that the problem of cancer is not merely a biological and laboratory problem, but it belongs to a certain extent to the realm of philosophy. . . . All experiments require certain philosophical preparation. And I have the feeling that in the case of cancer many experiments were undertaken without the necessary philosophical background, and therefore proved useless."

I bring these two citations together because I believe the second bears pertinently on the first. The explanation for the reason why magnifying glasses, though known to man since the most ancient times, were not used to investigate nature, must be sought along the lines of the "necessary philosophical background."

The fact that an instrument, the magnifying lens, was at hand for centuries but was not applied to the study of nature, need not puzzle us. Nor need it puzzle us that at a certain time this instru-

*Original not in italics.

ment was at last applied with extraordinary results. My conviction is that the microscope was not invented, any more than was the wheel or the lever. At a given time the microscope was applied to the study of nature, just as Köhler's (4) chimpanzee, at a *given* time, applied the long available disjointed pole to reach the fruit beyond the stretch of its arm.

The explanation for the application of the microscope to the study of nature can, I firmly believe, be found in the elaboration of the "necessary philosophical background," witnessed in the refinement of the basically fixed thinking pattern, or intellectual instrumentality, *the relation of the macrocosm to the microcosm*. Most of us now fail to appreciate the quality of this concept because we are too acutely aware of its astrological applications. *We miss seeing the face, for the intrusion of a too bulbous nose*. Of the macrocosm-microcosm theory, Charles Singer observed: (5)

> As an explanation of the complexity of existence which thinkers of all ages have sought to bring within the range of some simple formula, this theory of the essential similarity of macrocosm and microcosm held, in the Middle Ages, during the Renaissance, and even into quite modern times, a position comparable to that of the theory of evolution in our own age. If at times it passed into folly and fantasy, it should be remembered that it also fulfilled a high purpose. It gave a meaning to the facts of nature and a formula to the naturalist, it unified philosophic systems, it exercised the ingenuity of theologians, and gave a convenient framework to prophecy, while it seemed to illumine history and to provide a key and meaning to life itself. . . .
>
> But as the years went on, the difficulty in applying the details of the theory became ever greater and greater. Facts were strained and mutilated more and more to make them fit the Procustean bed of an outworn theory, which at length became untenable when the heliocentric system of Copernicus and Galileo replaced the geocentric and anthropocentric systems of an earlier age. The idea of a close parallelism between the structure of man and of the wider universe was gradually abandoned by the scientific, while among the unscientific it degenerated and became little better than an insane obsession.

I cannot entirely subscribe to the last sentence of the quotation. The scientific world did not entirely abandon, but modified, elaborated, and adapted by extension the concept of macrocosm and microcosm.

Macrocosm and microcosm were first conceived with the heavenly bodies at one extreme, and man at the other. They were tied together

in a bond of reciprocal effects. Enormous amounts of speculation and objective study were devoted to both the macrocosm and the microcosm, and with time the scope and embrace of each was extended. As the mind of man conceived of heavens beyond the heavens, and spheres beyond the spheres, so, too, it conceived of microcosms infinitely smaller than man. To materialize these conceptions into the confirmed data of experience, there arose the need for the telescope and the microscope. In this connection I may cite the words of Abelard of Bath, and the comments thereon of Lynn Thorndike. Abelard says in *De Eodem et Diverso.* "The senses are reliable neither in respect to the greatest nor the smallest objects. Who has ever comprehended the space of the sky with the sense of sight? . . . Who has ever distinguished minute atoms with the eye?" And on these passages Thorndike (6) comments as follows: "Notable natural questions these, showing the need of the telescope and the microscope was already felt and that the discovery must in due time follow."

The macrocosm-microcosm idea has survived to this very day. Where the heavenly bodies stood, it now embraces the entire universe of the Einsteinian physicist, and where man was, the infinitely small units of the electron world.

With this brief excursion into the history of the microscope in mind, I want to present three items for your consideration, namely:

1. What determines the nature of the problems to which the men of a given period devote their attention;
2. The intellectual instrumentalities which they utilize in the efforts to solve their problems; and
3. The role played by ideologies in these efforts, or more specifically, the role played by speculative philosophical background prerequisite to discovery.

* * * * * *

Man's curiosity as to the nature and quality of the world in which he lives is proverbially insatiable. This world, however, is infinitely complex. The predominating interests of mankind, as well as those of the best intellects of any given period, are in no small measure determined by the quality and nature of the pressing problems that confront the given generation. Each generation is heir to the intellectual, cultural, and ideological heritage of the preceding genera-

tions. Each age, therefore, meets its problems with the implements of its ancestors. These implements are of necessity reshaped by each inheritor, but in the main they retain their basic character. At certain historical periods there is to be witnessed what appears to be a radical self-disinheritance, a violent rejection of what the past generations have left behind them. An uncritical study of these periods may lead one to believe that they were truly revolutionary in the sense that they were as quick in conception, and as swift in maturation, as they were explosive in manifest expression. Upon careful study, however, they are invariably found to be the dynamic manifestations of potentials that were long in accumulation. (This is as true of discoveries as of political and social upheavals.) Traced back far enough, the so-called revolutions will be found to be rooted in the common and continuous advantage of the human intellect. They are not really radical departures, nor do they represent the self-disinheritance of the revolutionists. They constitute rather a selective discarding and an equally selective appropriation of the inheritable elements. In such periods the old matter is refurbished and polished, being thereby much improved, and it is used to create new intellectual wealth.

* * * * * *

The problems which confront mankind are of an abiding basic character. Different ages face varying versions of these problems and thus the belief arises that new problems are being confronted. This belief is not validated by the conditions. I should not be understood as contending that the world and humanity are at a standstill. I mean only that human experience is a continuum, that the basic problems confronting mankind are fundamentally of an abiding character. Also in its attempt to meet these problems, both in understanding of their nature and effectively, mankind employs certain basic concepts, certain intellectual implements which throughout time retain their essential patterns.

The growth of human culture, and intellectual progression may thus be conceived as an elaboration:

1. in the complexity of mankind's problems,
2. of the intellectual comprehension of these problems, and
3. of the refinement of the intellectual instrumentalities with the aid of which mankind attempts to resolve them.

The history of science, of political, of economic, and of religious development, can better be understood when studied with the above cited ideas in mind. The puzzles of seeming discontinuities, of sudden spurts, or "bolt out of the blue sky" developments, are then seen to be fictitious, or merely the accidents of erroneous perspectives.

* * * * * *

Philosophical maturation is promoted by experience. Experience, though the ultimate test-master, is a very slow and unreliable teacher. For effective philosophical maturation the data of experience must be weighed, evaluated, and anticipated by speculation. Unfortunately, speculation now is, and long has been the stepchild of the science family. The favored child is experimentation: research. The results of this partiality have been, atrophy of the speculative faculty among research workers; retardation in scientific progress; woefully blind and erroneous interpretations and application of research findings. Because of the discredit cast upon pure speculation, there is "want of the necessary philosophical background" urgently needed for new discovery. I am well aware that to speak favorably of pure speculation is to invite in retort a passionate parade of all the stupidities which pure speculation has yielded. The retort is prejudiced. It does not credit the great fruits which pure speculation has yielded. It is blind to the idiocies and stupidities that can be charged to research when it is unilluminated by speculation. Worst of all, it misses the basic fact that behind all fruitful experiment there must of necessity be a speculative idea, a philosophical concept.

A compromise solution is at times offered by some who say, there is really no need for pure speculation: what we need is a free exercise of the speculative faculties of the experimenter while he is outside the laboratory. They thus echo the words of Claude Bernard:

> Put off your imagination as you take off your overcoat when you enter the laboratory; but put it on again, as you do the overcoat, when you leave the laboratory. Before the experiment and between whiles let your imagination wrap you round; put it right away from yourself during the experiment itself lest it hinder your observing power (7).

Unfortunately, the da Vinci type of genius is rare among mortals. It is well to wish for those who unite in their persons competence in

speculation and in experimentation, but better to realize that such mortals are very, very few in number. It is of practical consequence for us to realize as Schiller (8) has written:

> That it is not easy to reach equal proficiency in both stages of successful action, or of successful inquiry, may cheerfully be admitted. The good theorizer is not necessarily the most ingenious experimenter or the most careful observer.

For practical purposes we must acknowledge the desirability of a division of labor, and honor and reward the theorizer no less than the experimenter. However, the prevailing mood is against such practice, and again to quote from Schiller:

> Hypothesis receives a somewhat Cinderella-like treatment in intellectual logics. It is disparaged and intellectualized as much as the facts will allow, though, since Bacon's egregious failure, no one has dared to prohibit it altogether. . . . The scope and value of hypothesis are studiously minimized, and their use is restricted by regulations which purport to curb their license and to ensure their soundness. But the simple truth is that intellectual logicians are *afraid* of them."

So ingrained and violent is the prejudice against speculation that many of the best men are deterred from hypothesizing, or do so only in abject apology. While this state of affairs is a blight upon all science, with the possible exception of mathematics, itself essentially pure speculation, its dire effects are witnessed markedly in the biological specialties, including medicine. One can wade through volumes of current medical literature without encountering a page of " pure theory." Rarely, only very rarely, does one find some courageous soul venturing a new hypothesis, a new scheme by which the accumulating data can be fashioned into a more comprehensive and satisfying body of knowledge, and by means of which new ventures into the unknown may be charted. Every such venture is generally met with grim derision, and bitter opposition. What is disparaged and opposed is not the end result of the speculation or hypothesis, but the very fact that the given person in this day of enlightenment dared to speculate.

Most medical historians contribute to the perpetuation of this unreasonable prejudice. They subscribe to the storekeeper's notion of merit—practicality and palpable results. They credit, not the man with the idea, but the man who, appropriating the idea, em-

bodied it in an accomplishment. The father of endocrinology, the medical historians report, is Claude Bernard, not Theophile de Bordeu, and this despite the fact that the latter's theoretical conceptions came much closer to endocrinology, as it is developing, than ever did Bernard's. Bordeu is dismissed with the observation, " He made no experiments, his ideas can be regarded as only theoretical."

Medical history, as it is commonly written and taught, is a chronicle of achievements, recording who did what, and when. It is thus that the medical historian glorifies the deed and neglects the motivating idea. History cannot be intelligently written in terms of transpiring actions. History certainly cannot be understood from such data. The history of the human race, in all its manifold phases, can be adequately understood only in terms of the inception, growth, and development of ideas. The greatest motivating forces in religion, politics, and science, are ideologies. Experience, including experimentation, supplies the raw stuff out of which ideologies are extracted. Experience is itself fashioned, in no small measure, by ideologies. It is this the Greeks had in mind when they said " character is destiny." In the last analysis, ideologies are fabrics of the loom of the human mind. They are woven by speculation out of the threads that may be spun by experience. It is incumbent on the medical historian to fathom the full significance and to appreciate the dynamic force of speculative thought, and to pronounce its worth to this world that is so pathetically unimaginative and unphilosophical.

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JOHN GILCHRIST, J. P., L. M. B. U. C., M. P.

A Pioneer New England Physician in Upper Canada

JABEZ H. ELLIOTT

John Gilchrist was the first physician to be granted a license to practice "Physic Surgery and Midwifery" in the Province of Ontario. This was under the Medical Act of 1818, which was enacted to control the practice of medicine in Upper Canada.

Previous to the passing of this Act, army and navy surgeons, university graduates, and those holding British qualifications were allowed to practice upon application but the sparsely settled province was overrun with quacks, empirics and imposters, who had no medical education.

The medical board appointed under the Act of 1818 did not require a degree in medicine, but did require attendance at prescribed courses of lectures in a medical school, or exceptionally, apprenticeship with, or instruction by, a well qualified physician and surgeon. Up to 1867 a great many men who became licensed to practice had taken the full course in various universities or medical schools, but had not proceeded to a degree.

John Gilchrist, the son of Samuel Gilchrist a farmer and mill owner living at Bedford, New Hampshire, was born February 5th 1792. He pursued his medical studies at Yale Medical School 1815-16 and completed his course at Dartmouth College, Hanover, N. H. in December 1816.

He was the eldest of four brothers, all of whom took their medical lectures at Dartmouth College, Hanover, N. H. and practiced in Upper Canada and all of whom had high reputations as practitioners.

Samuel attended Dartmouth in 1822 and was registered as of Hamilton Tp. U. C. He qualified before the U. C. Medical Board in 1824 and practiced at Port Hope until his death in 1849.

James Eiken attended Dartmouth in 1830 and was registered as of Cobourg U. C. He qualified in 1832, settled at Cobourg and practiced there until his death in 1871.

Hiram the youngest of the four brothers attended at Dartmouth

in 1833 and was registered as of Port Hope, Ontario. He practiced in Port Hope with his brother Samuel with whom he had been a student. He died at Port Hope in 1852 three years after his brother Samuel.

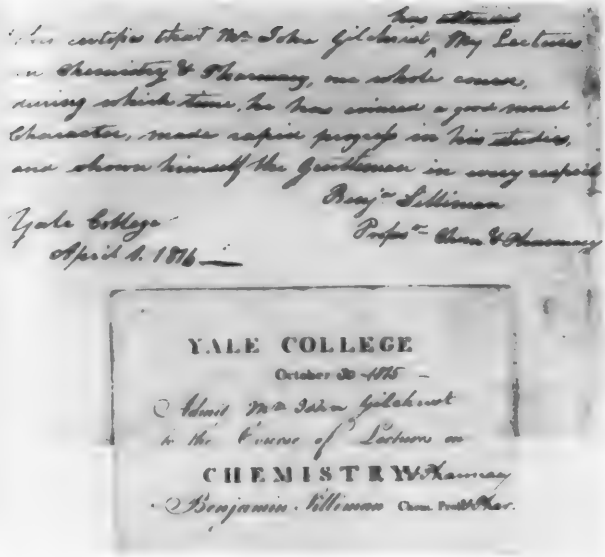
None of the brothers appear to have proceeded to a degree at Dartmouth. We have Nathan Smith's certificate of John having satisfied the examiners of his fitness for the degree of M. D. but the College records do not show that he received it.

Dartmouth Medical College was founded in 1798 through the efforts of Dr. Nathan Smith who took an active part in the foundation of five or six medical schools in the Eastern United States. He gave the lectures in all departments for twelve years up to 1810, when he was asked to establish the Yale Medical School.

It would appear that Nathan Smith for some years lectured both at Yale and at Dartmouth and that John Gilchrist attended both Colleges. Four of his certificates are in the library of the Academy of Medicine, Toronto; one course in Chemistry and Pharmacy signed by Benj. Silliman, Yale College April 1816, one in Materia Medica 1815-16 signed by Eli Ives, Yale College March 22, 1816, one course of Medical and Surgical Lectures signed by Jonathan Knight, Yale College March 22, 1816, and one certifying he had passed an Examination touching his qualifications for the Degree of M. D. signed by Nathan Smith, Professor of the Theory and Practice of Physic and Surgery, Hanover Dec. 11, 1816.

These certificates read as follows:

> This certifies that Mr. John Gilchrist has attended my Lectures on Chemistry & Pharmacy, one whole course, during which time he has evinced a good moral character, made rapid progress in his studies and shown himself the Gentleman in every respect.
>
> Benj'ª Silliman
> Profssr Chem. & Pharmacy.
>
> Yale College
> April 1, 1816.


This certifies that Mr John Gilchrist has attended My Lectures on Chemistry & Pharmacy, one whole course, during which time, he has evinced a good moral Character, made rapid progress in his studies, and shown himself the Gentleman in every respect

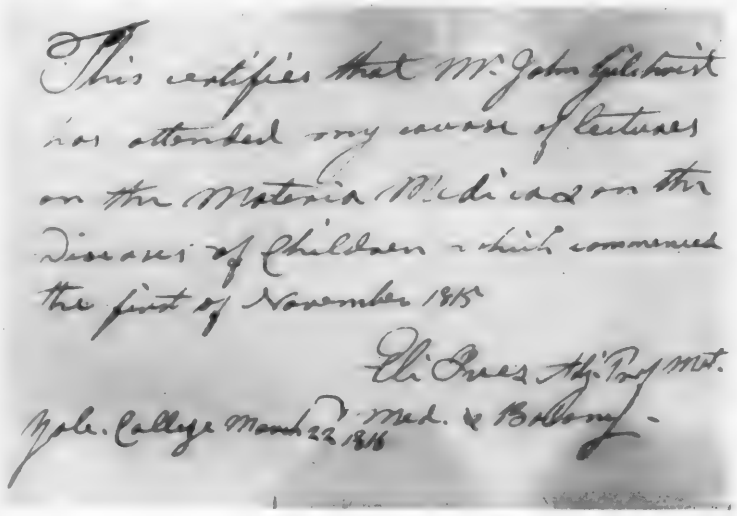
Benj.n Silliman
Profs.r Chem.y & Pharmacy

Yale College
April 1. 1816

YALE COLLEGE
October 30 1815 —
Admit Mr John Gilchrist
to the Course of Lectures on
CHEMISTRY & Pharmacy
Benjamin Silliman Chem. Prof. &c.

Fig. 1.

Lecture Ticket and Certificate of Benjamin Silliman
Yale College 1816.

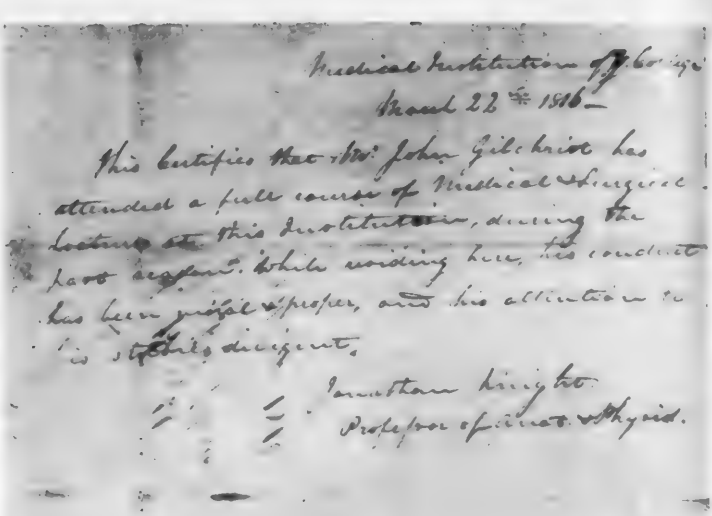

This certifies that Mr. John Gilchrist has attended one course of Lectures on the Materia Medica and on the Diseases of Children - which commenced the first of November 1815

Eli Ives Mem. Prof. Mat.

Yale College March 22 1816 Med. & Botany -

Fig. 2.

Certificate of Attendance at Lectures, Yale College 1816.



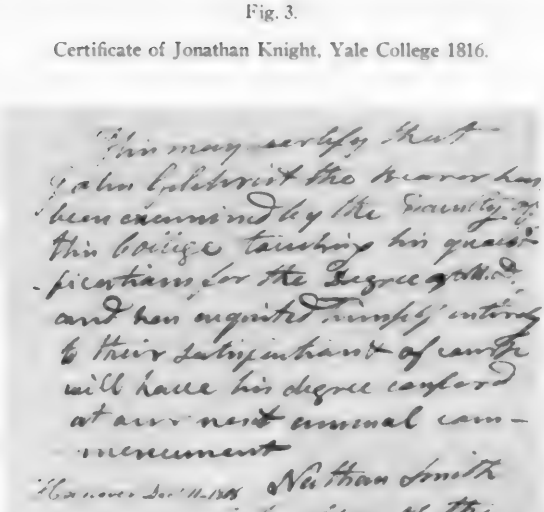
Medical Institution of Yale College
March 22d 1816

This certifies that Mr. John Gilchrist has attended a full course of Medical & Surgical Lectures at this Institution, during the last winter session. While residing here, his conduct has been regular & proper, and his attention to his studies diligent.

Jonathan Knight
Professor of Chemistry &c.

Fig. 3.

Certificate of Jonathan Knight, Yale College 1816.



This may certify that John Gilchrist the bearer has been examined by the Faculty of this College touching his qualifications for the Degree of M.D. and has acquitted himself entirely to their satisfaction & of course will have his degree conferred at our next annual commencement

Hanover Dec. 11. 1815 Nathan Smith
Professor of the Theory & Practice & Surgery

Fig. 4.

Certificate of Nathan Smith, Hanover 1816.

This certifies that Mr. John Gilchrist has attended my course of lectures on the Materia Medica on the Diseases of Children which commenced the first of November 1815.

Eli Ives, Adj. Prof. Mat. Med. & Botany.

Yale College, March 22, 1816.

Medical Institution of Y. College,
March 22nd 1816.

This certifies that Mr. John Gilchrist has attended a full course of Medical & Surgical Lectures at this Institution, during the past season. While residing here, his conduct has been moral & proper, and his attention to his studies diligent.

Jonathan Knight,
Professor of Anat. & Physiol.

This may certify that John Gilchrist the bearer has been examined by the Faculty of this College touching his qualifications for the Degree of M. D., and has acquited himself entirely to their satisfaction & of course will have his degree confered at our next annual commencement.

Hanover, Decr. 11-1816. Nathan Smith Professor of the Theory & Practice of Physic & Surgery.

After completing his course of studies he began practice in Goffstown, N. H., apparently in association with Dr. Jonathan Gove where he remained until early in 1818. Here he married Dr. Gove's daughter.

On leaving Goffstown he was given an open letter by Dr. Gove recommending him in the highest terms as a man of excellent quali-

ties and well qualified for practice. Proceeding to Upper Canada he took up residence in the township of Hamilton in the present county of Northumberland, near the town of Cobourg which is on the north shore of Lake Ontario.

He presented himself before the newly organized Medical Board of Upper Canada at its first meeting in January 1819 with James Macauley Christopher Widmer, William Lyons and Grant Powell present. He was examined and found duly qualified to practice Physic, Midwifery and Surgery. His license was issued by the Lieutenant Governor the following day January Sixth. It reads as follows:

UPPER CANADA

> Sir Peregrine Maitland, Knight Commander of the Most Honorable Military Order of the Bath, Lieutenant Governor of the Province of Upper Canada, and Major General Commanding His Majesty's Forces therein etc. . . . To all to whom these present shall come . . . greetings;—
>
> Whereas in and by an Act of the Parliament of this Province made and passed in the fifty-ninth year of His Majesty's reign, entitled, " An Act to repeal an " Act passed in the fifty-fifth year of His Majesty's " reign, entitled, " An Act to Licence Practitioners " in Physic and Surgery throughout this Province, " and to make further provision for Licencing such " Practitioners " it is among other things enacted that it shall and may be lawful for the Governor, Lieut. Governor, or Person administering the Government, to constitute and appoint under his hand and Seal at Arms, five or more persons legally authorized to practice Physic, Surgery or Midwifery in this Province, to be a Board, whereof any three to be a quorum, to hear and examine all persons desirous to apply for a Licence to Practice Physic, Surgery and Midwifery, or either of these within this Province; and being satisfied by such examination, that such person is duly qualified to practice Physic, Surgery and Midwifery,

or either, to certify the same under the hands and Seals of two or more of such Board, whereupon the Governor, Lieutenant Governor, or person administering the Government, being satisfied of the Loyalty integrity and good morals of such Applicant, may under his hand and Seal at Arms, grant to him a Licence to Practice Physic, Surgery and Midwifery, or either, conformable to such Certificate—And whereas a Board has been constituted under the foregoing prosions—

Now Know Ye, that John Gilchrist of the Township of Hamilton, in the District of Newcastle, gentleman, has being duly examined by such Board as a foresaid touching his qualifications to practice Physic, Surgery and Midwifery, and hath obtained therefore and exhibited a Certificate in due form stating his qualifications to practice, the three before mentioned branches respectively. . . . And

And Know Ye further that Reposing confidence in the Loyalty, integrity and good morals of the said John Gilchrist, I do hereby, in virtue of the Power and Authority in me vested, by the before mentioned Act, License him the said John Gilchrist to practise Physic, Surgery and Midwifery within this Province—

Given under my hand and Office Seal at York, the Sixth day of January in the year of Our Lord one thousand eight hundred and nineteen, and of his Majesty's Reign the fifty-ninth.

P. Maitland,
Lt. Governor.

SEAL

By His Excellency's Command.
George Hillier.

We are told that he walked the 70 miles from Cobourg to Toronto, took his examination the following day January 5th, re-

ceived his license from the Lieutenant Governor on the 6th and walked home on the 7th.

In 1822 he was gazetted surgeon to the 1st Northumberland Regiment of Militia. In 1824 he left Hamilton township to take up the South ½ of Lot 9, Con 7 in Otonabee township which was that year opened up for settlement. Here he became a progressive farmer. In 1825 he erected a grist mill with one run of stones, and a saw-mill with a single upright saw. He built houses for his workmen and the village was named Keene after a town in his native state. In the winter of 1829-30 he opened the first general store in Keene. He added to his group of industries a distillery with a capacity of 22¼ gallons a day. With a partner he developed an export business in square timber, logs and staves. His industrial and mercantile enterprises were left to a great extent in the hands of competent and trustworthy persons while he carried on his busy practice. In 1834 we find he opened an office in Peterborough in addition to carrying on at Keene which gave him twelve miles of largely settled country to cover daily where his undoubted skill had gained the confidence of the community.

To secure sufficient head of water for his grist mill and saw-mill at Otonabee he tapped the Indian River digging for a head race a canal half a mile long at his own expense. In later years, to increase the supply of water in the Indian River on which his mills, and those of Hon. Zaccheus Burnham at Warsaw depended for their power, these gentlemen excavated through a ridge of rocks a cut from the upper end of a bay know as Gilchrist's Bay on Stoney Lake to the head waters of the Indian River. This materially increased the flow in the river and has afforded a second outlet to the waters of Stoney Lake.

The development of steam navigation on the lakes and rivers of the Trent Valley System and the construction of the Trent Valley Canal necessitated the building of locks and dams with resultant changes in water levels. This seriously disturbed Dr. Gilchrist's industries at Keene by lowering his already slight head of water. His troubles in this respect and his claim for damages have been told by F. H. Dobbin who ascertained the facts from old files of papers which contained the incidents of the long contended claims

against the government for damages resulting from flooding the houses built for his workmen and reducing the output of his grist mill, saw mill and distillery. There was a further claim for losses of lumber amounting to 175,000 cubic feet of square timber, 25,000 standard staves for barrels and 40,000 staves for export to the West Indies. Major Strickland records that in 1850 upward of one million feet of square timber passed through Peterborough on its way to Quebec. The principal lumbermen were Gilmour & Co., Charles Perry and John Gilchrist Esqs.

He appears to have taken a very active part in Municipal affairs and in the realm of politics. He was one of the early appointees as Justice of the Peace for Otonabee. When the new Colborne District was proclaimed October 14, 1841 Dr. Gilchrist was appointed Treasurer. This district was composed of the townships now forming the Counties of Peterborough and Victoria except the Northern tiers. He held this office until 1846. It is of interest to recall that in those days the District Treasurer was not paid a salary, but was allowed four percent upon all moneys passing through his hands and a fee of one shilling for every inspection of his books and accounts. In 1849 an annual salary was attached to the office. Dr. Gilchrist continued to act as Treasurer until October 1846 when he was succeeded by Dr. Frederick Ferguson. Each of these gentlemen acted in turn as Government Land Agent, Dr. Gilchrist's predecessor being his political opponent Col. Alex McDonell.

A strong Baldwin reformer he offered himself as a candidate and was returned in the election of 1834 for the Legislative Assembly of Upper Canada. Northumberland then sent two members to the Assembly. The conservative candidate Col. Alex McDonell was also elected. The other candidates were James Grey Bethune and W. S. Conger. The latter was elected in a bye-election for Peterborough in the 5th Parliament January 26, 1856 succeeding John Langton appointed Auditor.

He contested the next election which was held at Sully in 1836 when Col. McDonell was again elected. The other contestants were Henry Ruttan Esq. and Geo. W. Boswell Esq. who became member for the South Riding of Northumberland in 1841. These were the days of open elections with refreshment booths near the polling

place where stood barrels of whiskey with the heads knocked out from which the electors might dip and drink at pleasure. With these copious libations there were usually scenes of violence but we are happily told that on this occasion " no lives were lost."

This election was shortly followed by the stirring times of the Mackenzie Rebellion. There were twelve persons arrested in the Newcastle District on suspicion of seditious practice all of whom were discharged. Dr. Gilchrist was arrested in December 1837 but was not tried and was honourably discharged by the Magistrates without imprisonment. It has been said that he was too important and useful a man in the District in which he lived to trifle with.

His popularity is indicated by the fact that in the next election he was elected over Col. McDonell by a large majority. This election of 1841 was memorable in the riding as not only the first after the union of the Provinces but also for a scene of violence rarely exceeded among the preceding contests, exciting though they had been.

The election for the new provincial District, which then embraced what is now the Counties of Peterborough and Victoria, was held in Peterborough, and had its head quarters at White's Hotel situated just each of George Street, in the southern part of the town, where the poll was opened by Captain Frazer, the returning officer. The candidates were:

Colonel Alexander McDonell,
Frederick Ferguson, Esq.,
Dr. John Gilchrist.

The former of these gentlemen appeared in the conservative and the latter in the reform interest. As the election progressed it became evident that Dr. Gilchrist would be elected, and a plot was at once formed to break up the election, so as to prevent his legal return. The conspirators were to approach in a body; the door keeper was to make a show of resistance and be knocked down, with his own consent. In the melee which would follow, the poll-book was to be seized and destroyed, and thus the opposing party would be deprived of the only legal evidence of the election of their candidate.

The room was full of people, among whom were the candidates and their agents, when the conspirators stealthily approached. On

reaching the room, a fierce show of fight was made, amid which the guardian of the peace rolled over as if smitten by a thunderbolt. The books of the check clerks and other papers were speedily seized, but the presence of mind of the Returning Officer defeated their design. On the first alarm, he quietly slipped the poll-book beneath his coat, where it remained secure.

Whether from accident or otherwise, Dr. Gilchrist received a blow upon the head with a stick, from which, he speedily recovered.

But though baulked in their design, some of the more daring and reckless pursued the game still further. The Returning Officer then occupied a room at White's, and on his going out in the evening to dine with a friend, his apartment was entered, and a valise cut open, in hopes of finding the coveted poll-book within. But Captain Fraser, as if anticipating their design, had taken the precious document with him, and retained it in his possession, so that this second attempt failed as ignominiously as the first.

The election of 1841 resulted in the election by a considerable majority, of John Gilchrist, as member of Parliament for the new Colborne District, which position he continued to fill during the next four years.

A writ was issued to contest this election but the writ was not returned.

We find him active in the founding of Victoria College.

On the 27th of January 1831, the Committee appointed by the Canada Conference of the Methodist Episcopal Church to fix on the place for locating the proposed seminary to be known as Upper Canada Academy selected Cobourg as the site. Seven persons were chosen as a Building Committee, five to form a quorum. Dr. Gilchrist was the Chairman of the Committee. The Committee were instructed to proceed to provide materials for building as soon as £2.000 was subscribed, and one fourth of it collected. The corner stone was laid June 7th 1832. The Cobourg *Reformer* gave an account of the ceremony from which this is an extract. "The foundation stone of the Upper Canada Academy was laid on Thursday last by Dr. John Gilchrist accompanied by the Building Committee of which he is Chairman. We witnessed the ceremony with unmingled delight, regarding it as the commencement of an under-

taking which promises incalculable advantages to the rising generation and reflects the highest honour on the Province, the District of Northumberland, and the Methodist Episcopal Church generally." On its completion it was described as the finest educational building then erected or being erected in the Province.

Financial difficulties held up the completion of building until the

Fig. 5.

Cobourg U. C. About 1845.

Victoria College in background.

summer of 1836, when it was opened on the 18th of June. On October 12th 1836 a royal charter was granted, the first in the British dominions to a college not under the state church. In 1841 the first Parliament of the United Provinces of which John Gilchrist was a member, extended the charter, under the name of Victoria College with power and authority to confer degrees of Bachelor, Master and Doctor of the various Arts and Faculties. Victoria in 1890 became federated with the University of Toronto and in 1892 moved to its

new buildings in Queen's Park where it is one of the largest colleges of the University with over 900 students.

On May 12th 1847 he was given his commission as Surgeon to the 7th Battalion Peterborough Militia.

Shortly after the expiration of the First Parliament of the Province of Canada he moved to Port Hope where his brothers Samuel (d. 1849) and Hiram (d. 1852) were in practice. Here he did a large rural practice up to the time of his death in September 1859.

The best traditions of the profession were exemplified in his great benevolence in attending all who might require his services irrespective of their ability to pay. Dr. Thos. W. Poole tells this illustrative story. " Mr. David Houston a Scotchman the teacher of the school on the East half of lot No. 20 in the third concession (Otonabee) was detained by a severe attack of fever and ague at the house of Mr. John Williams, above Sully, for nearly two months. Being in a precarious state, Dr. Gilchrist was sent for to visit him, which he did more than once. On his recovery, his gratitude to the doctor expressed itself in a letter of thanks, in which he lamented that he had no money, but promised to pay him as soon as he could. In reply he received the following letter replete with the spirit of true Christian charity, which we present to the reader all the more readily from the fact, that we have but few written memorials of the kind physician or the enterprising citizen from whom it emanated:—

> Sir,—When you see a fellow-creature in distress relieve him as far as your abilities will allow; and in so doing you will discharge the debt you owe to
>
> John Gilchrist."
>
> Otonabee—1830.

In 1831 this card appeared: " Dr. John Gilchrist informs his friends that he has rented his property in Otonabee, and shall in future give his undivided attention to the medical profession. He presumes that experience of nearly fourteen years in the most successful mode of treatment, etc, etc, will secure him patronage."

This also appeared: " The undersigned experiencing much inconvenience from the long and, in many instances, endless credit which he has given in his professional business, will in future conduct his accounts in a very different way. To all such as pay him down or

within a month after his discontinuing to attend them as patients, a deduction of 25 per cent will be made on his usual charges. And such as allow their accounts to run over a year are informed that not only a doctor's, but a lawyer's bill will be to be paid.
Cobourg, January 11, 1831. John Gilchrist."

I have presented to you John Gilchrist as an example or type of a pioneer in a sparsely settled district in Upper Canada who proved himself not only an able physician but as well a citizen of wide and varied interests as merchant, miller, distiller, manufacturer, lumberman, Crown lands agent, municipal treasurer, Justice of the Peace, politician, militia surgeon, legislator and patriot. He was a sturdy pioneer, one of the many we were fortunate to have in Upper Canada, a man of sterling character, competent grasp of affairs, industrious and with shrewd common sense, a man with a vision of the future of the district and appreciation of the national resources of the country all awaiting development; a man who ventured when others hesitated to make investments in the much needed mills and other enterprises required for the settlers in the rapidly opening country, and withal, a practitioner who had unbounded confidence of the community he served.

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OCCUPATIONAL DISEASES OF ENGLISH SEAMEN DURING THE SEVENTEENTH AND EIGHTEENTH CENTURIES

GEORGE ROSEN

To the landsman sailoring has always been an occupation redolent of strange sights and exotic climes and the sea-farer a figure expressive of romance and adventure. Such a view-point may be useful for the poet and the novelist, but an investigator desiring to study the medical history of the seaman finds this approach sterile and useless. For his purpose it is better to consider the sailor from a more prosaic, but certainly more realistic angle. By regarding him as a worker performing his task under certain conditions not of his own choosing, it is much easier to investigate his medical history, which thus becomes a study of occupational disease.

The chief sources for an investigation of occupational morbidity and mortality among English seamen of the seventeenth and eighteenth centuries are the various writings dealing primarily with health conditions in the Royal Navy. This seemingly limiting circumstance is, however, more apparent than real, and in no way circumscribes the scope of such a study. It should be remembered that the distinction between the man-of-war's man and the merchant seaman was much less sharply marked in the days of sailing ships than it has since become.

At the end of the 18th century the expansion of trade and commerce initiated by the explorations and discoveries of the Elizabethan Age had culminated in the rise of England to a position of maritime and commercial supremacy. These two centuries during which the English gradually extended their dominion over the sea and found themselves repaid for their pains by commerce and colonies, were filled with the incessant alarums of war. Of the one hundred and twenty-six years between 1688 and 1815, sixty-four, or more than a half were spent by Britain in waging various wars ranging from seven to twelve years in length. That England emerged victorious from these struggles was in no small measure due to the fighting capacities of her navy, yet as Halévy pointed out

the secret of England's sea-power lay not in the material equipment of her fleet but in the temper of the crews that manned the fighting ships. Now who were these men, under what conditions did they carry out their important task, and how did these circumstances affect their health?

The traditional method of manning the navy was impressment. Gilbert Blane at the end of the 18th century calls it " a practice which has had the public sanction for ages." In time of war the press-gangs had the right to seize anyone for service in the Fleet. All was grist for their mill, and landsmen totally unprepared for naval duty were to be found serving side by side with trained seamen taken by force from merchant ships. Under William III an abortive attempt was made to regulate the enrollment of men for service in the Royal Navy, but it failed and the press-gangs returned to scourge the sea-ports. When this source proved inadequate the magistrates in the large towns were called upon to open the jails and deliver the incarcerated vagabonds and criminals for service.

Having been seized for naval duty the men were either taken on board their respective ships immediately or confined in guardships. In the latter case, Blane tells us, they were kept " under such circumstances of bad air and bodily filth as tend to generate the most virulent infection." Once on board they were entered on the ship's books and assigned to a particular watch.

The crew was divided into two watches, each of which was subdivided into smaller groups for the performance of some particular task. The number of men required for a ship of war was extremely large. Anson's *Centurion*, a middle-sized vessel, carried a complement of four hundred seamen and one hundred marines. It should be remembered that in addition to the men who sailed and steered her, many skilled craftsmen were required to work at special tasks and occupations aboard the ship.

Living quarters for these hundreds of men were below decks, generally on the main gun or berth deck in the narrow spaces between the guns. Here crowded into dark, dank, poorly ventilated holes they ate, slept, and carried on what social life they could. Many others, among them the surgeons, were even farther removed

from the light of day and fresh air. Roderick Random's first impression of the cockpit allotted to the surgeon's mates was that of a dismal gulf, dark as a dungeon, and filled with an intolerable stench.

During the 16th century and possibly well into the 17th century the seamen slept on deck covered with blankets, or whatever bedding they possessed. Hammocks were first issued at the end of the 16th century and gradually came into use during the next two hundred years. During the 18th century the hammocks in which the men slept were suspended from the beams in rows so closely packed that hammock touched hammock. In the sick-berth, Smollett relates, "not more than fourteen inches space was allotted for each [patient] with his bed and bedding. . . ."

There was no official uniform for the sailors of the Royal Navy during the period under consideration and the men wore whatever clothes they pleased or possessed. That they did not change their apparel often is evident from Blane's remark that "the greatest evil connected with clothing, is the infection generated by wearing it too long without shifting. . . ."

The food of the British seamen remained unchanged throughout the greater part of the seventeenth and eighteenth centuries. The weekly allowance per man was: bread or biscuit 7 lb.; beer, 7 gals.; beef, 4 lb.; pork 2 lb.; peas 2 pts.; oatmeal 3 pts.; butter 6 oz.; and cheese 12 oz. Wine or spirits might take the place of beer and a certain quantity of flour and suet could be issued instead of beef. Not only was the diet a restricted one, but owing to the general corruption, waste, and peculation pervading the administration of the Navy, the quality of the food was poor, and sometimes the provisions were absolutely foul. On the *Centurion,* in which Anson circumnavigated the globe, the biscuit was so worm-eaten that it could hardly be used for food, and the beef and pork were rotten and rusty.

Under such conditions, where hundreds of men were crowded together and compelled to live and work in an extremely unhygienic environment the occurrence of disease was almost inevitable. In addition to the morbid conditions produced by filth and malnutrition, the seaman was also subject to diseases which were the result of exposure to the elements, fatigue, and other hardships attendant upon

his arduous occupation as well as of insanitary surroundings. It is therefore not at all surprising to find that the diseases prevalent among British seamen throughout the 17th and 18th centuries were infectious fevers, avitaminoses, pulmonary and cardiac complaints, rheumatic affections, and ulcerative conditions of the extremities. Thus in 1617 John Woodall discussed callentures or fevers, scurvy, dysentery, and ulcers, while almost two hundred years later Thomas Trotter was still similarly occupied with typhus, ague, yellow fever, catarrh (influenza), dysentery, small-pox, rheumatism, and scurvy.

Information regarding the incidence of morbidity and mortality is naturally scanty, nevertheless the available data enables one to obtain an approximate view of the situation. The duration of life among seamen was short. Blane remarks that " they are in general shortlived and have their constitutions worn out ten years before the rest of the laborious part of mankind." According to Trotter they age prematurely, and " few of them live to be very old." If we turn to the mortality statistics the wonder is not that so few lived to an old age, but rather, that so many survived to middle age. At the beginning of the 17th century Sir Richard Hawkins stated that in 20 years he had known of ten thousand men who had died of scurvy. On his voyage around the world from 1740-1744, Anson lost 4/5 of his men. He had left England in September 1740 with six men-of-war manned by 1872 sailors and soldiers. About ten weeks later 450 men were sick and 160 had already died. A year after leaving England 292 men had died aboard Anson's flagship, the *Centurion*, leaving a crew of 214. The mortality on board the *Gloucester*, another ship of this squadron was even greater, for out of a much smaller crew the same number of men were lost and only 82 remained alive. The statistics reported by Gilbert Blane in 1785 confirm this high rate of mortality. The fleet to which he was attached consisted of twenty ships of the line with a total complement of 12,192 men. During one year, from July 1780 to July 1781, there were 1577 deaths from disease in this group which is equivalent to a crude mortality rate of 12%. Two years later the incidence of mortality for a twelve-month period was about 5%. For the entire three years from 1780 to 1783 during which Blane served as physician to the West Indies fleet the total number of deaths, exclusive of those that were killed or died of wounds, was

3200. This is equivalent to a crude mortality rate of 26% for the triennial period or an annual average incidence of about 8%.

Statistical evidence concerning the incidence of morbidity reveals the same general picture. James Lind reported that when the grand fleet arrived at Portsmouth in November 1779, one-tenth of the total complement had to be hospitalized. During Blane's period of service with the West Indian fleet the highest annual rate of morbidity was 6.6%.

No account of morbidity among seamen can in any sense be considered complete without some knowledge of the relative prevalence of the various diseases most frequently occurring in this occupational group. Both Lind and Blane contribute some very interesting information on this point. During the two year period from 1758 to 1760 the former observed that fevers, scurvy, consumption, rheumatism, and dysentery were "the most frequent and fatal diseases in the Royal Navy." In March 1782 Blane listed fevers, fluxes, scurvy, ulcers, small-pox, rheumatism, and pectoral complaints as the most prevalent diseases of the English Fleet in the West Indies. It is interesting to note that in each group the rate of morbidity for fevers was 42%. Yet since the category of fevers included a number of diverse diseases the value of this information is obviously limited. Lind reported a high incidence of scurvy in his patients, 19%, while in Blane's group this disease accounted for only 6% of all the cases. The relative prevalence of dysentery in the two groups was reversed. While only 4% of Lind's patients had dysentery, this disease was present in 24% or practically ¼ of Blane's cases. The rates of morbidity for the less frequent maladies, such as rheumatism and diseases of the chest, varied from 6% to 0.9%.

It is obvious from this brief survey that the high incidence of morbidity among the seamen confronted the naval surgeons with an extremely serious and important problem, for a fleet ravaged by disease was a completely impotent instrument, unable to fulfill its functions. But how did they solve this problem? In other words: What was known concerning the origin and nature of the most prevalent diseases and what was done to cure and prevent them? At this point it is first of all necessary to define "fevers." As employed during the period under consideration the term included typhus

fever, as well as typhoid and paratyphoid, relapsing fever, yellow fever, and perhaps various other febrile diseases. Nevertheless the chief constituent of this category was typhus.

As long as the natural history of these diseases remained unclear and they were not sharply differentiated clinically, vague ideas prevailed regarding their etiology. John Woodall's remarks on the causes of fevers may be considered typical of the views held throughout the 17th and for a good part of the 18th centuries. " The causes thereof," he says, " are divers, as namely, the intemperature of the climate, or degree of the world causing an evill habit in the bodies of man when they come into such contagious aires, the evil nutriment the Sailers have at sea, strong obstructions, the abuse of themselves in diet and customes, and divers other reasons too long to insist upon." In 1757 James Lind first showed that the contagion of typhus was transmitted " from men lately diseased, or from the tainted Rags of Jails. . . . " Similar views were expressed by Gilbert Blane in 1785 and Thomas Trotter in 1797. All three of these men emphasized the pernicious rôle of the practice of impressment in introducing typhus fever into the ships of the Royal Navy. Lind asserted that in times of peace " the seamen in his Majesty's Service are in general, healthy." In war-time, however, when the immediate equipment of a large fleet rendered the impressment of men necessary, the indiscriminate seizure of all sorts of individuals and their promiscuous confinement aboard ship permitted the introduction of infection. Blane speaks of impressment as " one of the principal means both a generating and spreading the seeds of disease. . . . " He also attributes the generation of infection to crowding and lack of ventilation.

Just as in the case of " fevers " extremely vague notions prevailed concerning the causes of those other two scourges of the seaman, scurvy and dysentery. As the causes of the former condition Woodall listed obstruction of the spleen; continuous salt diet; want of sufficient nourishment, sweet water, aqua vitae, wine, and beer to warm and comfort the stomach; lack of fresh clothes, and long watches as well was hard labour without sufficient food. James Lind, who stated clearly the means of preventing scurvy, still included meteorological conditions among the causes of this disease, and Blane stated in 1785 that " though other causes conspire in aggravat-

ing the scurvy the depraved state of the *Ingesta* is the usual and principal cause of it." This state of confusion during the 17th and most of the 18th centuries may be attributed in part to the lack of a precise clinical definition of scurvy. Various conditions exhibiting dermal manifestations were called scorbutic. It was not until 1754 that an accurate clinical description of scurvy was given by Lind. Similarly dysentery was only vaguely separated from the fevers, and various diseases attended by diarrhoea were diagnosed as dysentery. In all these conditions there was practically no knowledge of the essential underlying pathology, so that we are not at all surprised to find the therapeutic efforts of the naval surgeons like those of their contemporaries on land confined to bleeding, the administration of emetics and purgatives, inducing sweating, the application of blisters, and the employment of Peruvian bark, opium, camphor, and wine. No matter what the disease some or all of these measures and medicaments were used sooner or later.

While it is difficult to record any progress in the therapy of the diseases with which the sailors of the 17th and 18th centuries were afflicted, considerable advances were made in the prevention of fevers and scurvy. The realization that the "infectious ships fever" or typhus was transmitted by dirty clothes led to the establishment in 1781 at Portsmouth of a ship for the reception of the newly impressed men. Here they were stripped, washed, and provided with clean clothes before joining their respective ships. Their old clothes were either destroyed or fumigated and baked. No definite measures were taken, however, to prevent filth and crowding on board ship, although all writers on naval hygiene insisted on the necessity for cleanliness and dryness in the vessels and effective personal hygiene among the crews. At the end of the 18th century Trotter still complained that these important matters were generally neglected.

More impressive, however, was the institution of anti-scorbutic prophylaxis towards the end of the 18th century. The effect of fresh vegetables and fruit juices in preventing scurvy had been recognized by the Dutch as early as the middle of the 16th century. Purchas in 1601, Woodall in 1617, and Mead in 1749 all attested the anti-scorbutic value of lemon and orange juice. In 1754 James Lind clearly and accurately pointed out that scurvy could be pre-

vented by providing ships with a supply of fresh vegetables and citrus fruits, and in 1781 Gilbert Blane presented a memorial to the Board of Admiralty in which he expressed a concurrent opinion. A practical demonstration of these contentions was given by Captain Cook on his second voyage from 1772-75. His crew consisted of 112 men, only four of whom died, one due to tuberculosis and three from accidents. It was not until 1795, however, when Gilbert Blane was appointed to the Navy Medical Board of the Admiralty that the use of lemon juice was made compulsory in the Royal Navy. The effect of this measure was summed up by Trotter in 1803. "A case of scurvy requiring to be sent to hospital," he wrote, "has not come under my observation since 1795." In this connection it is interesting to note that the invention of improved systems of ship ventilation by Sutton and Hales and the introduction of Sutton's ventilator into the navy in 1749 was largely owing to the theory that defective ventilation was a cause of scurvy.

The brief sketch presented here is a preliminary report on a more extensive study of the medical history of seamen. It is intended as a contribution to the history of occupational medicine and to emphasize the view that to study the history of disease adequately the medical aspects must be considered as functions of the social context within which they are embedded and investigated in relation to it.

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A HISTORY OF THE CARE OF THE SICK POOR OF THE CITY OF DETROIT (1703–1855)

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In Detroit, today, and throughout the entire nation, for that matter, there is an increasing interest in the problem of caring for the sick poor. In that city, the organized medical profession, the various social agencies, and the local government have already taken steps to meet this problem effectively. Their efforts, representing the consummation of almost two hundred and fifty years of activity directed toward this problem, can be best understood in the light of that long chain of events which made the present system what it is. In particular, the first one hundred and fifty years, the period with which this research is concerned, were characterized by the establishment of certain practices and policies, which have come down to modern times. Records of these activities are fortunately abundant, and from them, this research was made possible.

The history of the care of the sick poor, during this period, is concerned essentially with a series of governmental and voluntary efforts to meet the health and hygienic needs of such persons. These needs, motivated by a constant biological struggle for survival in a constantly changing social setting, were frequently accentuated by a series of chronic pathological conditions, interspersed with a number of epidemic emergencies, which, together with the panic of 1837, constituted a challenge to those who attempted to meet the problem. Although, in the struggle to overcome such forces, the status of the sick poor was at times alarming, and those, who could have done something about it did absolutely nothing, there were, on the other hand, others who employed every possible means to improve it. Ignorance of the laws of Mental Hygiene and Sociology meant, it is true, that the adopted measures were not always correct. Nevertheless, the public-spirited citizens who sponsored these measures and helped to carry them out, deserve lasting praise for the sincerity of their efforts, and the great contribution they have made to the cause of Public Welfare in Detroit.

The evolution of the public health movement in Detroit divides this century and a half into two major eras, from the early part of the eighteenth century to the year 1832, when the first of a series of cholera epidemics invaded the city, and from this time, to the year 1855, when the city recovered from its last cholera visitation. Together with a number of prevalent diseases, and the problems of smallpox and mental incompetence, these epidemics comprised the nucleus from which evolved the present organization for the care of the medically indigent in the city of Detroit.

Although in the early days the French pioneers were mostly poor, that " supineness of which poverty is born was unknown " (Farmer, Silas, " History of Detroit and Wayne County," I, p. 644). Despite their " hard times " and " empty purses," their " wasting fevers and shivering agues," there was no pauperism (Bagley, John, Judson, " Reminiscences of the Early Days of Mich.," MS, 1876, p. 3). In a day and age when " butter and eggs were pin-money; wheat paid the storekeepers; sled-length knotty wood that wouldn't make fence rails paid the minister," the " occasional pig or a grist of corn . . . paid the doctor " (Ibid.). Undisturbed by the " different schools of medicine " (Ibid.) the " poorly paid, yet patient and jolly doctor " was always available (Ibid.). With his " boneset and wormwood, pennyroyal and catnip . . . his jalap and cream of tartar, his calomel and quinine . . . " he ministered to the poor (Ibid.). Poor indeed they were, " very poor " (Burton, C. M., Misc. Notes, MS, I, p. 660), but there were no medically indigent.

If there was in those days an emotional, social, and economic component to illness, as there is to-day, then such a component constituted merely an added challenge to the pioneer pluck. The tenets and doctrines of modern Medicine, Mental Hygiene, Public Health, and Economics could well be epitomized in the traits of the pioneer, who

> " From toil he wins his spirits light,
> From busy day, the peaceful night,
> Rich, from the very want of wealth,
> In heaven's best treasures—peace and health "
>
> (Bagley, op. cit., p. 7).

For almost one hundred years, the early settlers cared for their poor as best they could. Despite their hardiness, they could not

escape the ravages of disease, to which they were frequently exposed. As early as 1703, the contagion of smallpox made " several inroads upon the infant colony " (Farmer, Silas, " History of Detroit and Wayne County," I, p. 48), and again in 1732 and 1734, the disease brought about many fatalities (Ross, R. B., and Catlin, G. B., " Landmarks of Detroit," p. 67. Also, Burr, G., " Medical History of Michigan," I, p. 709). Objections at this time to inoculation with diseased matter from a cow's udder (Ibid., 710), rendered the early settlers highly susceptible to the disease, and, shortly after, when another outbreak, in 1785, greatly alarmed the population (Farmer, op. cit., p. 48), the problem of providing adequate care for the afflicted needy reached the official attention of the Territorial authorities.

Under the requirements of an Act of 1790, of the Northwest Territory, the Overseers of the Poor were charged with the duty of providing " ' proper and seasonable relief ' " to those " ' proper objects of public charity ' " suffering from " ' poverty, sickness, accident, or any misfortune or inability ' " (Bruce, I. C., and Eickhoff, E., " The Michigan Poor Law," p. 72). The Act, as worded, readily indicates the awareness of the authorities of the presence in the city of a number of " vagrants " (Ibid.), for whom the Legislators apparently were unwilling to do anything, and thus, the first governmental regulation concerning the sick poor already recognized the problem of vagrancy, a problem which resisted solution throughout the entire period described by this research.

For the next five years the above Act apparently was sufficient to meet the needs of the sick poor. By 1795, however, the number of medically indigent increased to a degree where funds for their care were lacking. An Act was, therefore, passed, requiring one township to imburse another for the care of the poor belonging to the former (Bruce and Eickhoff, op. cit., p. 72). Compliance with this law was mandatory (Ibid.). Ten years later, in 1805, the Territorial marshal was charged with the responsibility of contracting with the lowest bidder for the support of all the poor, the sick and the well (Ibid.). Although the City of Detroit was incorporated in 1802 (Journal of the Proceedings of the Board of Trustees, 1802-1805, p. 1), the Territorial laws were the only regulations concerned with the care of all the poor.

Unfortunately, all these provisions came to naught, since in the year 1805, the "Old Town" was completely destroyed by fire ("Copy of an original letter in the papers of Wm. Woodbridge," Nov.-Dec. 1834, MS). There were no public funds, "nor in strictness Legislative power, except that remaining in Congress . . ." (Ibid.), and, whatever efforts were exerted to relieve the afflicted poor, were likely of a voluntary nature.

During the period of reconstruction, such voluntary efforts must have proved inadequate at best, and, with the inevitable beggars and vagrants that came with the Yankee invasion, "not because the Yankees set the example . . . but because upon their advent the population increased . . ." (Farmer, op. cit., p. 644), the problem grew in proportion. By 1809 the Legislative Authorities took cognizance of the whole situation and proceeded to act accordingly. On November 6, of this year, an Act was adopted calling for the appointment of "three discreet persons" to "relieve, support, and maintain all the poor, lame, sick, . . . who are not able to maintain themselves, and shall provide for them houses, nurses, physicians, and surgeons as they . . . shall judge necessary" (Keenan, Stanislas M., "History of Eloise" [1913], p. 26).

The appreciation of the Legislative authorities of the need for qualified personnel in contacting the medically indigent is clearly indicated by their specification that such persons must be "discreet," and, thus, the present stringent requirements for the training of the professional medical social worker can be said to have been anticipated in Detroit as early as 1809.

Although the enactment of this law came just before the city was threatened by another outbreak of smallpox (Burr, op. cit., p. 717), records of any efforts to protect the poor against its contagion are wanting. Another outbreak of this disease in 1813 (Farmer, op. cit., p. 48), followed by a "deadly epidemic" in 1814, "closely resembling the Asiatic Cholera" must have created an acute problem among the indigent (Catlin, G. B., "The Story of Detroit," p. 198), but what measures were taken could not be discovered. The evidence also fails to reveal what was done for those indigent persons afflicted with other diseases prevalent at this time, such as gout, jaundice, lock-jaw (Detroit Gazette, I, No. 5, Aug. 22, 1817), hydrophobia

(Ibid., I, No. 15, Oct. 31, 1817), whooping cough (Ibid.), " scurvey in the gums," " mortal fever " (Michigan Essay, 1809), cholera morbus (Det. Gazette, III, No. 109, Aug. 20, 1819), dysentery (Ibid., III, No. 113, Sept. 17, 1819), asthma and consumption (Ib., IV, No. 198, May 4, 1821), bilious fever (probably malaria) (Ib., III, No. 112, Sept. 10, 1819), and Typhus Fever (Ib., IV, No. 202, May 25, 1821).

Whatever measures were adopted at this time to provide for the sick must have been of a voluntary nature, since between the years 1805, when the entire community was destroyed by fire (Copy of an original letter in papers of Wm. Woodbridge, 1834 MS) and 1815, when the city was re-incorporated, there was no constituted local government (Journal, 1815-1824, op. cit., p. 1).

By 1817, two years after the community was re-incorporated, the Board of Trustees instituted a system of outdoor relief, which, although probably inadequate, gave rise to several historically important measures. In this year occurs the first official record of local governmental relief to a medically indigent person. A " crazy man without any visible means of support " having been boarded by a private citizen, the Board appropriated the sum of " 37 dollars, 37 and one-half cents " for his care (Journal of the Proceedings of the Common Council of the City of Detroit, 1815-1824, p. 24), an event which marks the beginning of a governmental program for the care of the mentally ill.

What was done officially at this time for the physically ill is not revealed by the record, but the establishment in the same year of the first voluntary agency, the " Moral and Humane Society " (Farmer, op. cit., p. 650), and in 1818 of the " Protestant Orphan Asylum " (Burton, C. M., " city of Detroit, 1701-1922," I, p. 419), served to meet their needs, in all probability.

By 1824, the County Commioners were in charge of the sick poor, providing them with medical attention and medicines (Burton, C. M., " Diary of Detroit, 1823-1826," MS), a service which originated the County Physicians' Office and the dispensary system in Wayne County.

In the city itself, now numbering about two thousand inhabitants (Burton, C. M., Misc. Notes, MS, I, 177), such a system of outdoor

relief soon became inadequate. In the following year, 1825, the problem of providing medical relief assumed major proportions when a number of diseased and disabled soldiers, discharged from the Army, were unable to leave the city (Burton, C. M., " Diary of Detroit, 1826-1827," MS, III). Quick to see the need for a hospital, the " Detroit Gazette," the first local newspaper (Farmer, op. cit., 650), editorially made the first recorded recommendation that such a place be built (Burton, C. M., op. cit., 1826-1827), but the Common Council failed to act on the suggestion at this time.

By 1827, the cost of maintaining a system of outdoor relief having increased " beyond all expectations " (Burton, C. M., op. cit.), the Common Council undertook a series of measures calculated to procure a poor house. After five years, during which time the local authorities attempted unsuccessfully to interest the populace in voting for the project (Keenan, op. cit., p. 26), the poorhouse was finally constructed 16 miles from the city, and, in December of 1832, was ready for occupancy (Ibid.).

In the meantime, the Overseers of the Poor were in charge of all the poor, the sick, and the well (Journal, 1824-43, pp. 79, 81, 87), and upon the death of an indigent person the local government provided for his burial. This procedure, instituted in 1827, was also carried out under the supervision of the Overseers of the Poor. The first record of such provision occurs in 1827, when an " account for two coffins for two paupers " was presented to the Common Council for payment (Ibid., 81), an item which marks the first time the term " pauper " was employed in the official proceedings of the Common Council.

While these efforts to provide outdoor and indoor relief were being directed in the interests of the poor and the sick, an approaching epidemic of smallpox engaged the attention of the Common Council. Realizing the communicability of the contagion, particularly among the poor, the authorities immediately proceeded to adopt a series of measures for their protection, measures which proved to be not only effective but precedental. When, in the spring of 1829, the Council apprehended, " from information communicated to them, that this City may be visited with the disease of Smallpox or Varioloid," they proceeded to " warn the Citizens who are not protected

against these maladies by vaccination of their danger" (Journal, op. cit., p. 177). For those persons "whose pecuniary circumstances render them the objects of their benevolence," the "gratuitous services of the Medical Gentlemen of the City" were "respectfully solicited" (Ibid.).

This appeal is of historic significance, in that it marks the first official attempt by the local government to render a public health service to the indigent of the city. It also represents the first move toward the establishment of the office of City Physicians, which subsequently played a major role in the care of the sick poor.

Apparently the response of the "Medical Gentlemen" was highly effective. No further Council action was taken, and thus the first smallpox epidemic to threaten the city since its incorporation found the local governmental health agency concerned with the medical needs of the poor.

The successful preclusion of an epidemic by medical efforts did not escape the attention of the Legislative authorities of the Territory. Their headquarters being in Detroit at this time (Funk & Wagnalls, New Standard Encyclopedia, IX, p. 119), they could readily have discerned the need for a place providing for the sustained medical care of the poor. As a matter of fact, on October 29, five months after the adoption of the vaccination program of the Common Council, a Territorial Law was enacted authorizing the appointment of five Overseers of the Poor to contract with a "'competent physician'" by the year, provided this physician was the lowest bidder (Bruce, I. C., and Eickhoff, E., op. cit. pp. 77-78). Whether or not medical competence, even in those days, was reconcilable with cheapness of fee, is questionable, and thus the medical needs of the poor likely were not gratified with the best availab[1]- facilities.[1]

Although this Act appears to have been motivated more by the desire to conserve funds rather than to relieve the needs of the sick poor, it nevertheless carries historic significance. For the first time, a policy was adopted by the Legislative authorities bearing the

[1] In this respect, however, the treatment of the sick poor was not unlike that displayed by some modern agencies whose relief work appears to be directed toward the maintenance of a minimum level poverty by their method of providing food, shelter, clothing, and medical care.

nucleus of a Preventive Medicine program specifically directed toward the medically indigent.

Unfortunately, the local government did not perceive the public health and economic values resident in such preventive measures. Although in March 1830, a local physician was employed to attend the poor (Journal, op. cit. p. 196), the Common Council failed to continue the practice, apparently believing the problem could be solved by the erection of a poor house.

Had the Common Council continued the practice of sustained preventive medical care for the poor, it is likely that the next outbreak of smallpox would have found the poor protected. Such, however, was not the case, and when, two years later, smallpox broke out in the community, it became necessary for the Common Council again to organize a program of combat against the disease. Fortunately, in the organization of this program, several events took place of epochal importance in the evolution of the social welfare and public health movements of the city. Thus the failure of the Common Council to carry out the provisions of the Territorial Act was not without its compensation.

When, in the fall of 1831, an outbreak of smallpox was discovered within the city, the Common Council immediately proceeded to protect the poor against its contagion. Evidently mindful of the effective services rendered by the " Medical Gentlemen " in connection with the epidemic of 1829, the Common Council again called upon them. This time, however, three physicians were organized by the Common Council as a Board of Health, the first in the history of the City (Journal, op. cit., p. 123). On October 1, 1831 Doctors Chapin, Whiting, and Rice were accordingly designated as a Board of Health (Ibid.). They were identified as " Health Officers," the first time such a term was employed, and instructed to " proceed from house to house throughout the City, and vaccinate all persons who may not have been previously vaccinated or had smallpox . . . and that for vaccinating all such persons as are unable to pay for the same, the Health Officers be authorized to charge the Corporation " (Ibid.). Such compensation for medical care of the poor represents the first time the local government went on record obligating itself to pay for a public health service.

In addition to vaccination services for the medically indigent, isolation for the afflicted became necessary. Accordingly, by a precedental resolution, a committee was appointed to " erect or procure a pest-house for the reception of all such persons as are infected, or who have been exposed . . . " (Ibid.). Such a place was procured by renting a building for use as a pest-house, and thus the first actual outbreak of small pox since the initial incorporation of the city in 1802 found the local authorities prepared to protect the poor with several significant measures.

The year 1832 marked the beginning of a twenty-two year cycle during which the city was visited by four epidemics of Asiatic cholera. Unlike the smallpox outbreak of 1831, and the threatened epidemic of this exanthem in 1829, these epidemics were considerably more virulent and resistant. Both the voluntary and governmental agencies were unable to suppress the contagion as effectively, with the result that many deaths and immense suffering were imposed upon the citizens, the contagion wreaking its greatest havoc among the poor. By their endeavors to combat the contagion and protect the indigent, however, these agencies were successful in establishing certain practices which furthered the development of the social welfare movement in Detroit.

The first invasion of the city by the Asiatic cholera reached Detroit from Montreal (Journal, op. cit. p. 210). The contagion entered the city on July 5, when the Steamer " Henry Clay," bound for Chicago from Buffalo, docked at Detroit (Ibid., p. 211). Shortly after the first cases of cholera developed among the crew, the disease spread rapidly throughout the city, exerting its severest effects among the poor, the intemperate, and the helpless (Detroit Journal and Michigan Advertiser, III, No. 34, July 11, 1832). No sooner did the citizens recover from its ravages when in 1834 the disease returned in extremely virulent form (Burr, op. cit. p. 701) in fact, it proved to be the most malignant public health disaster in the history of the city.

Striking with relentless rapidity, both epidemics imposed inestimable damage on most of the people. Whereas, the epidemic of 1832 affected chiefly the intemperate, the poor, and the helpless, the contagion of 1834 with a pernicious callousness cut down the " upper

classes, the sober, the temperate, the church-going " (Ibid., p. 696), as well as the vagrant, the intemperate, and the impoverished. Streets and wharves were lined with the " itinerant stranger, the fixed inhabitants, the happy (?) traveler, the hardy sailor,"—all a " sickening litter of dying and dead " (Woodbridge, Wm., Copy of letter, op. cit.). " Agonizing distress was everywhere " (Ibid.). The gloom and horror were exceeded only by the seemingly hopeless state of the community to defend the poor against the ravages of the disease.

The suffering and deaths that followed, however, were not in vain. There came upon the scene at this time a number of unofficial persons who contributed their energies and lives to the afflicted poor in a way that served to build the foundation of the voluntary relief movement in the city today.

The Catholic Sisters of Charity, under the supervision of Bishop Rese and the remarkable Father Kundig, together with the physicians of the community, surrendered themselves completely to the cause of the poor, and, with inexhaustible courage, remained on duty until the debacle disappeared. Temporary hospital quarters were set up, and there they served night and day. With the first epidemic, the upper story of the Capital Building was converted into a hospital (D. J. M. A., op. cit., III, No. 34 July 11, 1832) where the destitute sick " were " immediately removed " and cared for (Ibid.). Two days after the second outbreak, the Catholic Sisters of Charity, under the supervision of Father Kundig, took over the Old Presbyterian Church for those victims " who might find refuge, health, and assistance " (Ib., V, No. 41, Sept. 3, 1834). Physicians and clergymen of all denominations had " free access " to the inmates, and before two weeks went by, 90 persons were admitted, " under aggravated forms of the disease," among whom were " persons who had no discriminations sufficient to suffer themselves to be brought in the incipient stages of the disease " (Ibid.). Of this group 46 survived (Ibid.).

The practicing physicians of the community, meanwhile, did not fail the needy and the distressed. Dr. Randall S. Rice, a member of the first Board of Health (Journal, op. cit., p. 123), " did wonders during both visitations " (Burr, op. cit., p. 696). During

the first epidemic in 1832 he devoted himself to treating the sick and needy without the slightest regard for compensation (Ibid.). To everyone who manifested a predisposition to the disease, such as the premonitory diarrhœa he administered a "'thumping dose of ipecacuanha, and calomel on the spot. It acted like a charm.'" (Ibid.) Dr. Marshal Chapin, also a member of the first Board of Health in 1831 (Journal, op. cit., p. 123), and Mayor of the town (Ibid.) was in constant attendance upon the poor. During all of August and September, in 1832, he "'never went home to sleep'" (Burr, op. cit., p. 701), subsisting mainly on oatmeal porridge brought to him in his office (Ibid.). On the same day he was at the "death bed of Governor Porter and a poor immigrant" (Ibid., 702). Other physicians in the community also surrendered themselves to the cause, and for their courageous work they will be long remembered (Ibid.).

Nor did the local and County officials stand idly by. Prior to the first invasion, a Board of Health, consisting of five physicians, was organized to establish quarantine at the mouth of the Detroit River (Journal, op. cit., p. 208), the first such measure undertaken in the history of the city. The County Supervisors also made their contribution. Ordinary requisites and precautionary measures were done away with,—"what . . . time was this for discriminating between County and Township paupers? or for tracing the domicile, or establishing the residence of the miserable victim of this appalling disease" (Woodridge, op. cit.). This was no time for administrative routine. In the face of such a debacle, "the better feelings of the human heart" (Ibid.) commanded succor to all. Neither time, nor money, nor labor were withheld (Ibid.). To "soften the asperities of distress—to administer to the wants of the afflicted . . . , to serve the last moments of the dying,"—this was the only thought of the Supervisors (Ibid.). Prompt in their actions, assuming "heavy responsibilities," they "evinced a liberality credible to the elevated character which the city had already acquired" (Ibid.).

The cost of financing the program adopted by the Common Council to combat the cholera contagion was met by private contribution as well as by governmental funds (Burr, op. cit., p. 700). The official cost amounted to $1,362.85, most of which was paid for

labor and services at the cholera hospital, such as medical attendance, medicines, food, merchandise, sexton's services, coffins, and digging graves (Journal, op. cit., p. 295). To raise funds, the Common Council appointed a committee to meet jointly with a similar committee of the Board of Supervisors to appeal to the Legislative Council " for appropriation for cholera expenses throughout Detroit and Wayne County " (Ibid.). Although the evidence fails to disclose the outcome of these activities, the effort by the Common Council to cooperate with the County Supervisors in an appeal to the Legislature marks the first time these three governmental bodies were simultaneously engaged in appropriating funds for the relief of the local sick poor.

Thus, when the most malignant public health disasters in the history of Detroit struck the city, they were confronted by a battery of physicians, laymen and officials whose first thought was for the poor, the helpless. Their untiring energies and ceaseless efforts, though crude, stand out as a splendid example, even in modern times, of a great humanitarian movement.

By the time the third epidemic of cholera made its appearance in 1849, and the fourth in 1854, the social welfare activities had progressed sufficiently so that provision for the poor was a comparatively lighter problem.

The subsidence of the cholera epidemics of 1832 and 1834 by no means terminated the task of caring for the needy. Privation and suffering abounded. Children whose parents were destroyed by the contagion were homeless and hungry (Burr, op. cit., p. 698). Adults, destitute and suffering from the effects of the contagion, were in need of help (Ibid., p. 701). The local government being apparently preoccupied with civic matters, the only agency which seemed to be interested in the plight of the poor was the Catholic Sisters of Charity, and so they came forward with a plan for the relief of the suffering.

Although the only available place for their care was the Poorhouse, located 16 miles from the city, a great distance in those days, the Sisters decided to remove the homeless, the destitute, and the orphans to this place and there provide for their needs. Accordingly, on March 8, 1833, three months after the Poorhouse was

opened, Bishop Rese, in behalf of the Sisters, entered into a contract with the Common Council, subject to revocation at any time, to supervise the care of these afflicted persons (Keenan, S. M., op. cit., p. 36).

Such commendable altruism unfortunately did not solve the problem. Sanitary and hygienic conditions at the Poorhouse were so bad that whatever measures were applied for the care of the inmates must have been at best ineffectual. Here the "pitiable orphans" were "cast upon the generosity of the city or county, children "whose parents have perished during the awful plague, babes in cradles, and tots creeping about unwashed and neglected amid filth and disease" (Ibid.).

Such conditions, by which the Poorhouse was rated on equal legislative terms with the county prison (Ibid.), were intolerable to Bishop Rese (Ibid.). Aided by many private and prominent citizens, he endeavored to alter the poor law of March 18, 1833, which assigned control to the Board of Supervisors, consisting at that time of twelve members of the township and seven from Detroit (Ibid.). His efforts were successful, and on March 7, 1834, occurred "the most important change that ever took place in the affairs of the county poor," the creation of the Board of Superintendents of the Poor (Ibid., pp. 36-37). For almost eighty years this Board remained in continual existence, and is the oldest Board in the North West Territory (Ibid., p. 37).

The helplessness of the poor following the second cholera epidemic was even greater. Sixty adults and fifty orphans, incapacitated by the contagion, were thrown upon the mercy of the community, but again the Catholic Female Association took charge of their needs (Catlin, op. cit., p. 316). These victims were taken to the Poorhouse and, together with the forty invalids already there. were provided for by the Sisters under the supervision of Father Kundig (Farmer, op. cit., p. 648). Although the cost of caring for these unfortunates was double the 16¢ allotments by the Common Council for each person per day, they nevertheless carried on, and for their great, untiring devotion they will be long remembered. (Woodbridge Papers, Letter by Father Kundig to Judge Woodbridge, MS, May 19, 1839).

Meanwhile the problem of providing for the indigent sick within the city continued to challenge the authorities. Although provision was made for the sick through the employment of various local agencies, such as, the Director of the Poor (Ibid. 533), and the Committee on Health (Ibid., p. 444), and at times by private citizens (Ibid., p. 442), the increasing number of general illness among the needy rendered the task too difficult for the local authorities, and so again the Catholic Female Association took up the cause.

Sensing the need for a local hospital, the Sisters decided to broach the matter to the Common Council. Early in January, 1835, about four months after the cholera subsided, the Sisters petitioned the Common Council for a local free hospital (Journal, op. cit., p. 307). Although the Council acknowledged their interest by appointing a Committee to cooperate in the project (Ibid.), no further governmental action was taken. The fact that the Sisters were willing at all times to co-operate toward the development of the project did not seem to impress the Council, and thus the first attempt to provide a local hospital for the needy poor proved to be ineffective.

Even if the Common Council would have collaborated with the Sisters in such a movement, their efforts would likely have been fruitless. Two years after this precedental effort to erect a hospital there came another crisis in the history of the city, the panic of 1837.

With all classes of people obliterated by the collapse of the currency, poverty was everywhere; the financial condition of the local government as well as of all the benevolent societies rendered them as poor as their erstwhile beneficiaries. " What are we to do with the poor? " (D. D. A., op. cit., II, No. 559, Apr. 5, 1838) was a particularly vexing question, and the only answer,—" The Poorhouse." But here conditions were no better. The Catholic Sisters and Father Kundig, in charge of the Poorhouse, were no less acutely distressed, and by 1839 their poverty was so great that their creditors invaded the premises and seized everything within their reach, including the clothing of the orphans (Farmer, op. cit., p. 648).

Deprived of leadership, the Poorhouse degenerated to the level of a veritable " human pickling vat " (As expressed by Prof. Kelso of the U. of Mich., re subject). Here the " blind, old, lame, sick, or

decrepit" (Bruce, I. C., and Eickhoff, op. cit., p. 74) were huddled together. Like their predecessors at the "Hospice" in England (Ibid.), the old and the young, sane and insane, the sick and the well, were clumped into one mass—"sleeping on straw and fed through grated windows like wild beasts" (Ross, Robert, B. and Catlin, Geo. B., "Landmarks of Det.," p. 465). Victims of a legislative attitude that rated them on equal terms with vagrants (Bruce and Eickhoff, op. cit. 72) they were, it seems, incarcerated for the crime of being sick or helpless.

Sanitary and hygienic conditions were so revolting that the great philanthropic reformer of charitable and penal institutions, Miss Dorothea Dix, reported, after her visit to the Poorhouse, that it "was the worst she had yet visited" (Catlin, Geo. B., "Digest Jrl. of Common Council, 1844-1852," MS, p. 16). Such was the penalty of being poor and sick.

The gross ineffectiveness of the remotely situated poorhouse served to emphasize the complete lack of local facilities for the chronically disabled. The mentally unbalanced, in particular, presented a problem of great magnitude. Free to roam the streets without restriction or supervision, they presented such a harassing problem, that, by 1840, the Council resorted to a legal investigation in an effort to solve the problem (Journal, op. cit., p. 636). Accordingly, in July, the City Attorney was instructed to examine the laws on the subject and report his findings (Ibid.). In this assignment, he was not requested to consult with the city physician or Board of Health (Ibid.), and when he submitted his report, epochal though it was, the problem was further complicated.

According to this report,

> "Lunatics who become either City or County charges should receive all the aid that would be calculated to remove or mitigate that unhappy affliction. It is as much the duty of those who have charge of the poor to provide suitable accommodations for the insane as the sane. The disease of the mind should not be disregarded while the wants of the body are supplied. If the pauper is suffering under bodily disease, medical aid is secured; then certainly the maniac should not be neglected, but suitable means should be had to ameliorate his condition, and this is imperative on the officers having charge of the poor; the law makes no distinction" (Ibid., p. 638).

Such an appreciation of the need for the scientific understanding

of the deviated personality represents the first official recognition of the problem of mental disease in the history of the city, and, thus, to the lawyer, rather than to the physician, must repose the honor of laying the foundation for the Mental Hygiene movement in Detroit.

The problem was now placed squarely up to the Common Council and the Director of the Poor. Two years later, an effort was made to procure an "asylum for the insane," but when constructed, the place was to house also the paupers of the city (Ibid., p. 756), an effort which would have undoubtedly resulted in a similar state of affairs as was now prevalent at the County Poorhouse.

Had such an asylum been constructed, inadequate as it would have been, the problem of caring for the mentally ill might have been somewhat eased. But by 1855, the close of the period covered by this research, "crazy" people were still wandering about the streets (Ibid., 1004), as completely oblivious to their derangement as the Common Council appeared to be to their needs.

In contrast to such indifference toward the plight of the mentally ill, both the governmental and voluntary agencies exerted great effort to provide for those indigent persons who were endangered by communicable contagion. In 1837, when the city was threatened by another outbreak of smallpox, five physicians were appointed to vaccinate those persons requiring it, and for those "poor persons in the City who will consent thereto . . . ," vaccination was to be performed at the "expense of the corporation" (Ibid., pp. 429-430). The Common Council went ever further. Four months later, in an epochal resolution,

> "All the practising physicians within the City of Detroit" were required to "vaccinate all persons who have not been previously vaccinated . . . and in . . . cases where persons so vaccinated are unable to pay the expense of the same, bills for the same in proper form may be presented to the Council for payment" (Jrl. p. 461. Also, D. D. A., II, No. 390, Sept. 16, 1837).

This action represents the first time that the entire medical profession became the official employees of the local government, and, thus, the foundation for whatever form of socialized medicine may come to Detroit, was laid as early as 1837.

This method of employing all the physicians of the city to vaccinate the poor proved to be effective in arresting the contagion of

smallpox. In fact, when, at this time, the Committee on Health petitioned some of the more prominent physicians of the community for information as to the best method for controlling the contagion, these physicians replied that the "public" were to be held accountable for the spread of the infection rather than the "corporate authorities" (D. F. P. op cit., I, No. 61, Aug. 14, 1837. Also, D. D. A. op. cit., II, No. 363, August 16, 1837). By the "public" these physicians must have referred to those citizens who were not medically dependent, since the "poor have . . . been extensively vaccinated at the expense of the city" (Ibid., Detroit Daily Advertiser).

From this it is clear that the indigent persons not only did not present any obstacle to the program for restricting the spread of smallpox, but actually cooperated, it seems, in a better way than did those who were economically secure. It may, therefore, be concluded that here is an example of greater success in arresting the spread of communicable contagion among the poor, than among the medically non-indigent.

The effectiveness of such a program was due in a large measure to the work of the city physicians. Although the city physicians were not empowered by Legislative authority until the passage of an Act in 1849 (Farmer, op. cit., p. 645), in all their activities, at all times, they served the community in a very satisfactory manner. It will be recalled how successfully they precluded a smallpox epidemic in 1829 (Journal, 1824-43, op. cit., p. 177), and again in 1837, when they were organized as a Board of Health to vaccinate the poor (Ibid., pp. 429-430). In fact, throughout the entire period covered by this research, the control of smallpox contagion among the poor was effectively maintained by these physicians.

With regard to the methods employed for their appointment, however, there was considerable difficulty. In 1840 the authority for the appointment of the physicians was in the hands of the Director of the Poor (Journal, op. cit., p. 627) but this he did not retain very long. Shortly afterward, apparently because of excessive charges for medical services by the particular physician employed at that time (Ibid., p. 630), the councilmanic committee associated with the Director of the Poor was instructed to make the appointments (Ibid., pp. 630, 656). However, this method also proved unsatisfactory.

By 1842 the Common Council was forced to resort to a general solicitation " for sealed proposals " through the newspapers for the " necessary medical attendance and medicines for the city poor . . . " (Ibid., p. 765). To this advertisement there were numerous responses, the " lowest " offer being accepted (Ibid., p. 770). But this method also failed. For the next two years appointments were made directly by the Common Council on petitions submitted by the citizens (Ibid., pp. 815, 908). By 1846, the individual aldermen were in charge of the city physicians (Journal, 1844-1852, op. cit., p. 1029) and, although their authority was reaffirmed in 1848 (Ibid., p. 1242), the following year 1849 found the physicians under the direction of the Committee on Health (Ibid., p. 1436). An Act of 1849 seemed to terminate the problem, the responsibility for their appointment reverting to the Director of Poor. From this time, assisted by the Committee on Health (Ibid.), the whole problem of controlling smallpox contagion seemed to be well under control.

Against other communicable diseases, however, comparatively little was done to protect the poor. Records of measures against scarlet fever, whooping cough, measles and other diseases, now known to be communicable, are lacking, likely because they were not considered contagious in these times. In addition, the prevalent malignant fevers, and the usual disabling diseases presented a difficult problem. When in 1841 and 1842, a virulent form of cerebrospinal meningitis appeared in endemic form, and, in 1843 and 1844, an outbreak of erysipelas endangered the community, the need became apparent for an " Infirmary, to enable physicians and surgeons to treat more successfully, that class of patients who cannot command the means and attention their accidents and diseases absolutely require (D. D. A., op. cit., X, No. 153, Feb. 11, 1845). Again the Catholic Sisters were the first to be on hand.

Aided by private contributions, the Sisters of St. Vincent de Paul established the first hospital in 1845, where " the afflicted portion of the human family " could find a " place of refuge " (Pen. Jl. Med., V, 1858, 298). Here the poor were provided for at city expense. Medical cases were charged a rate that, was left " discretionary with the Director of Poor " (Journal, op. cit., p. 1031).

Subsequent to this time, hospitalization for the poor, afflicted with

acute or chronic non-contagious affections seemed to be fairly satisfactory. Under the supervision of the Director of the Poor, the City Physicians were the intermediary agents between the hospital and City authorities and, on the whole, those who were in need of medical, surgical, or hospital services were not rejected because of lack of any of these facilities.

Contagious diseases, however, presented another problem not so easily solved. Pest-houses provided for the poor afflicted with smallpox met with the disapproval of the residents exposed to the structure. Frequently the city authorities were forced to remove them or build new ones, but always they were looked upon as a public health nuisance. It was not until many years after the period described here that the first isolation hospital was constructed, the poor in the meantime being sent to recover in these structures.

Another disease considered contagious for which there were no adequate facilities was the so-called "ship-fever" (Typhus fever?). When in 1847, two years after the St. Vincent's Hospital was constructed, "several cases of a contagious disease called the 'ship-fever' had occurred at . . . sundry quarters of this City," the lack of an isolation hospital was acutely appreciated, but where to send these cases was a problem (Jrl., op. cit., pp. 1155-1156). Fortunately there was situated in the city at this time, a Garrison which the Common Council decided to use (Ibid.). Accordingly an arrangement was made with the Commanding Officer and, here, under the management of the Director of the Poor, the cases were sent (Ibid.), an event which marks the first time the local and federal governments contributed to the solution of a local public health problem involving the indigent.

The need for a permanent isolation hospital became now more apparent, and again the Sisters of Charity came forward and undertook a movement for the construction of a "Charity Hospital" (D. F. P., XIII, No. 43, July 14, 1849). To assist them, the Common Council appropriated the sum of $500 (Jrl., op. cit., p. 1368), "the same to be repaid in hospital fees" (Ibid., p. 1371), but, unfortunately, before the structure was completed, the third epidemic of cholera appeared.

In the spring of 1849 when the contagion entered the city, the

Sisters of Charity were on hand to relieve the distressed poor (D. F. P., XIII, No. 43, July 14, 1849). Though the walls of the new hospital were still unlathed and unplastered, a number of the suffering were taken here and given the advantage of the "unremitting exertions" of "these 'ministering Angels'" (Ibid.). What the Common Council would have been able to achieve without the aid of the Sisters cannot be said, but the contribution of the latter was of considerable importance in restricting the spread of the contagion to the extent where this epidemic was of comparatively mild intensity.

During the stay of this epidemic, the indigent of the city were offered the added advantage of a Dispensary Service. Under the direction of the Board of Health, one of the small rooms in the City Hall was prepared for a public dispensary "where all persons unable to pay for medicines may be supplied gratis . . ." (D. F. P., op. cit., XIII, No. 43, July 14, 1849). Medicines "not to exceed $50 in amount" were to be kept on hand, to be used only "under the advice of physicians" (Ibid.). Notice of the dispensary day and night service was to be given in the form of "hand bills printed in German, French and English" (Ibid.).

Thus, with such a fairly well organized program, the cholera contagion was brought under control.

Shortly after the subsidence of the epidemic, the St. Vincent's Hospital was moved to larger quarters, the present site of the St. Mary's Hospital, and assumed the latter name (P. J. M., op. cit., V, 1858, p. 299). Those indigent persons who survived but were still afflicted with the effects of the cholera, as well as those infected by the "ship-fever" and a variety of other diseases, were treated by the Sisters at great physical, financial, and personal sacrifice (D. D. A., op. cit., XVII, Whole No. 4978, July 26, 1851).

For many years the St. Mary's Hospital continued to function as the only permanent place of refuge for the afflicted poor, and when the next, the last cholera epidemic in the history of the city made its appearance, the resident poor were well provided for, and, for the first time, did not constitute a serious problem.

With this epidemic, however, there came a new problem involving a number of afflicted indigent persons who were not residents of the

city, but for whom the Sisters showed equal concern (D. D. A., XIX, No. 291, Aug. 5, 1854). The work of the Sisters in providing for these people, however, was considerably handicapped by the unusually bad sanitary and hygienic conditions in which these strangers were found. Whereas the cholera morbidity was less prevalent among the general population (Peninsular Journal of Medicine, II, 1854-1855, 94), it reached a figure of " alarming proportions " (Ibid., p. 44) among the newly arrived immigrants (Ibid., 246). Out of a total of 1,000 cholera deaths during June, July, and August of 1854 (Ibid., p. 507), more than two-thirds of the mortalities occurred in the " foreigners " who had just arrived " from off ship-board, where they have been exposed to a malignant type of ship-fever " (D. D. A., op. cit., XIX, No. 291, Aug. 5, 1854). Another group " who live in filthy hovels in the outskirts of the city, where they drink the surface water which is pregnant with disease " (Ibid.), also suffered a higher mortality as did those who reached the city by " cars and steamboats . . . worn by travel, haggard by disease, and pinched by hunger and absolute want " (Ibid.). These people " came among us, strangers, too weak to work, too sick to beg, and too poor to supply themselves with wholesome food " (Ibid.). " The consequence is that they eat the cast off trash from the market and sicken and die,—others arrive here struggling with the ship-fever and live scarcely long enough to set their feet on shore " (Ibid.).

The Sisters of St. Mary's Hospital, nevertheless, continued to help these " objects of charity " with the same care and concern they evinced for the local poor, making no distinction for " nation, clime, and religion . . . " (Jrl., op. cit., 62), and for their great social and public health service, the present St. Mary's Hospital stands as a fitting tribute.

The increased morbidity and mortality among these immigrant poor illustrate the tremendous difficulties encountered by the local authorities in providing for their care. These " foreigners " however, were by no means the first to present a social, economic, and public health problem to the city. Shortly after the subsidence of the cholera epidemic of 1849, the number of resident paupers increased to such an extent, that " pauperism had actually become a

trade or calling among us," a condition resulting in the perpetration of "the most glaring frauds . . ." (D. F. P., op. cit., XIV, No. 45, July 17, 1850).

Although, in 1850, the Common Council succeeded in altering its system of providing for the poor (Ibid.), a system in use since 1835 (Ibid., XIV, No. 169, Dec. 10, 1850), by helping only those who were in medical need and sending all others to the poorhouse (Ibid., XIV, No. 45, July 17, 1850), "professional and permanent paupers" continued to harass the local government (Ibid.). For the worthy "poor and industrious, the temporarily sick and infirm, and the confirmed invalids" (Journal, 1853, op. cit., p. 141), there were on hand fraternal (Detroit Free Press, XIII, No. 214, Mar. 11, 1850. Also, Ibid., XIII, No. 250, Mar. 18, 1850), and benevolent organizations (Ibid., XIV, No. 11, June 6, 1850. Also, Ibid., XIV, No. 114, Oct. 3, 1850), to meet their needs. But to the maintenance of the increasing number of the "indolent, the intemperate and the dissolute," there was strong objection, since they presented a serious financial, social, and public health problem (Journal, op. cit., p. 141).

Just how great an economic and public health problem the latter constituted, is indicated by a report on the city poor fund to the Common Council in 1853. According to this report by the City Auditor, the pathological aspects of poverty are clearly indicated (Ibid.). During the summer of this year, "such of our citizens as have been supplied by their own labor or wealth with good provisions, clothing and dwellings" were found to be "unusually healthy" (Ibid.). "Yet the poor have suffered more than usual" (Ibid.). The financial statement of the poor fund showed a rise in mortality of 38%, and, in expenditures for hospital care, of 84%, "an increase not accounted for by the increase of inhabitants, and, taken in connection with the fact that there has been less sickness and deaths among our citizens generally, would seem to require that the city authorities take steps to ascertain and remove the cause of so much sickness and mortality among paupers" (Ibid.).

Those of the poor who were "very intemperate and when in health subsist by begging rather than by useful labor," dwelling in "hovels situated in unhealthy locations," feeding on "unsaleable

vegetables and refuse from the market . . . " thus being enabled to " evoke larger sums to the purchase of intoxicating liquids," were the most troublesome (Ibid.). Yet not withstanding their " utter unworthiness," when they become sick " the laws provided for their care and subsistence," for the cost of which " honest labor " was taxed (Ibid.).

Another group not belonging to the above-mentioned class, seemed to " lack the requisite intelligence to enable them to provide for themselves." According to the City Auditor such " weakness arises from improper indulgences in former years, either by themselves or by their parents; and although they labor and are guilty of no crime, they are so improvident that they are unable to maintain themselves " (Ibid.). For this group, he recommended the poorhouse, but unfortunately this place was already overcrowded (Ibid.).

The above report is of historic importance since it represents the first official recognition of the relationship of poverty to public health. The increase in mortality and morbidity among the indigent in contrast to a similar status among the provident population is consistent with the findings of modern sociologists and vital statisticians. The recognition by the Auditor of the problem created by that type of person, who is intellectually incapable of meeting the ordinary demands of reality, and by that type who becomes a pauper because of " his improper indulgences in former years either by themselves or their parents " represents a striking revelation of the mental hygiene implications of poverty. His recommendation that the Common Council " take steps to ascertain and remove the cause of so much sickness and mortality . . . among the poor " marks the beginning of the movement for social research in the city of Detroit.

Such a movement, however, did not gain momentum for many years to come. As late as 1876, three years after the panic of 1873, twenty-one years after the close of the period covered by this research, and more than a half a century before the year 1929, " statesmen, financiers, and political economists " were described by one Detroiter as still " groping in the dark for some measure of relief, proposing all sorts of impossible schemes, legislating this way and that . . . imagining that an Act of Congress may prove a magician's wand by which hard times may be waved away and good times beckoned . . . " (Bagley, op. cit., p. 8).

And so, as the story comes to a close, the sick, the crippled, the deaf, the mute, the blind, and the insane remained the recipients of the merciful concern of the religious and benevolent societies, and, at the same time, the victims of a Legislative ruling which still classified these unfortunate souls with prisoners and criminals.

For such an attitude, however, the law-makers should not be condemned. The science of Public Health and Social Psychiatry had not yet been born. The ideology of the English poor laws was still alive, motivating each and every act of the guardians of the public weal. They did the best they could, and for their efforts the present administration of the social welfare in Detroit are deeply grateful.[2]

[2] The writer is now working on a continuation of this subject.

SOME DISTINGUISHED AMERICAN MEDICAL STUDENTS OF PIERRE-CHARLES-ALEXANDER LOUIS OF PARIS

WALTER R. STEINER

Last year in my Presidential Address, I spoke on Louis, a distinguished Parisian teacher of medical students. As he numbered among his students some from this country, I should like tonight to devote my address to a few of these who later became distinguished.

Of the little band of American students who studied under Louis, " some there be that have no memorial yet there are others of them who have left a name behind them that their praises might be reported," and in this latter group we must give first place to Dr. William W. Gerhard. He was born in Philadelphia on July 23rd, 1809, and after graduating from Dickinson College received his medical degree from the University of Pennsylvania in 1830 while he was serving as a Resident at the Philadelphia Almshouse. Continuing in that position until early in 1831, he then at the suggestion of his teacher, Samuel Jackson, went with a classmate, Casper W. Pennock, over to France to study under Louis. Both of them there became friendly with a student from Boston, James Jackson, Jr. With Gerhard as their ring-leader, they sent a note to Louis accompanied by a handsome pecuniary offer, requesting private lessons. To this proposition Louis readily consented, so the trio became very happy considering their advantages for the study of pathology and diagnosis of the diseases of the chest to be now superior, in fact the very best in the world. Gerhard later went to England and Edinborough, and in the latter place saw many cases of typhus. Upon his return from Paris late in 1833, he became Resident Physician at the Pennsylvania Hospital. During two years spent thus, he had the opportunity of demonstrating that the common continued fevers of the United States were identical with the typhoid fevers studied by him in Paris. Then embarking in practice he became also one of the attending physicians to the Philadelphia Hospital with his Parisian fellow student, Casper W. Pennock. When typhus broke out in Philadelphia in 1836, he had the opportunity of studying

hundreds of cases which he showed were like the disease he saw in Edinborough but utterly dissimilar from typhoid fever. These differences he made clear in his papers in the February and August numbers of the American Journal for Medical Sciences in 1837. They were the first published explanations of the clinical and anatomical differences between typhoid and typhus fever. These papers were republished in the Dublin Journal of Medical Science for September, 1837, analysed in the London Medico-Chirurgical Review for October, 1837, and translated in the Parisian Medical Journal, L'Experience, for 1838. Alfred Stille, one of Louis' later pupils, had earlier been Gerhard's Resident Physician at the Philadelphia Hospital and had studied typhus fever with him as well as with Casper W. Pennock. On September 14th and 28th, 1838, he presented their conclusions before the Society of Medical Observations of Paris; but this paper was long unpublished as it was not printed until Dr. Osler insisted upon it in 1904. It was, however, referred to by Valleix, another of Louis' pupils, in the Arch. gen. for February, 1839. A few months later in the same journal for October, 1839, he mentions Dr. George C. Shattuck of Boston presenting another paper before the Society of Medical Observation in which Shattuck analysed thirteen cases of typhus observed in London and fully confirmed Stille's conclusion. (This paper by Shattuck was published in the Philadelphia Medical Examiner for February, 1840). Yet in spite of all this publication which showed conclusively that English and American typhus was a different disease from typhoid fever, yet Stewart, an Englishman, claimed in December, 1861, that he was the first to show the differences between these two diseases before the Parisian Medical Society in April, 1840. His paper, however, was not published until October of that year. In 1832, while both Gerhard and Pennock were studying in Paris, they published a paper on Asiatic Cholera. In 1837, Gerhard himself wrote an elementary treatise on the newer methods of physical diagnosis, which he entitled " Clinical Guide and Syllabus of a Course of Lectures on Clinical Medicine and Pathology." Five years later, he published his lectures on the Diagnosis, Pathology and Treatment of the Diseases of the Chest, which passed through four editions. In addition to these writings he became one of the Editors of the

Medical Examiner and gave the medical lectures at the Philadelphia Hospital.

In 1837, Gerhard had an attack of typhoid fever from which he apparently recovered, but six years later had an obscure malady accompanied by a little loss of power in one leg from which he never completely recovered. He believed that he had suffered from a slight stroke of apoplexy. This necessitated an ocean voyage some time later and he returned home to teach for a number of years more, but gradually the stroke of apoplexy seemed to have had a deleterious effect upon his subsequent career, for he exhibited no further signs of genius and repeated the same lectures year after year until the paper from which he read them was yellow with age. He retired from teaching in 1868 and died of apoplexy on April 28th, 1872, aged 63 years. Gerhard is usually given credit for the first accurate clinical study of tuberculous meningitis, being apparently the first to recognize it. Another paper upon Pneumonia in Children is also well known. Stewardson, one of his fellow students in Paris, had written " that he was remarkably successful as a clinical teacher and exhibited a powerful and commanding influence. . . . Students saw that truth was his object not display; the advance of science and not the gratification of personal feelings whether of vanity or ambition; in short that in his mind a deep interest in his subject and a thorough conscientiousness in the pursuit of it were the overmastering motives. . . . No man in his day enjoyed so high a reputation as a clinical teacher."

James Jackson Jr.

The most attractive of the little group of American students under Louis was James Jackson Jr. Dr. Osler has called him " the young Marcellus among the physicians of this country." (The young Marcellus; young but great and very good.) Dying shortly after his return from Europe at twenty-five years of age, he reminds us of the Wordsworthian lines:

" The good die young
But those whose hearts are dry as summer's dust burn to the socket."

He had an extremely attractive personality, was a brilliant student

and an enduring friend. He was born in Boston on the 15th of January, 1810, graduated with the degree of A. B. from Harvard in 1828. At college it was not possible to foretell what his later career would be, he was a good student there and after two and one-half years of study at the Harvard Medical School he joined the American group under Louis early in 1831. He continued under Louis' instruction until the summer of 1833 when he returned to America and received the degree of M. D. at Harvard in February, 1834. Upon his return home, he studied anew the cases of typhoid at the Massachusetts General Hospital, but unfortunately contracted the disease and when convalescent came down with an attack of dysentery from which he had previously suffered, dying of it just when he was to begin the practice of medicine. His Memoirs, written by his father are extremely touching, as they give extracts from his letters, while Dr. James Jackson's Life by Putnam gives Jackson's letters to his son. Both are well worth reading, as I know of no more interesting biographies. His classmate, Dr. Bowditch, has appended his reminiscences of James Jackson Jr. to one edition of his father's Memoirs. In it he states that he did not become personally acquainted with Louis at first, but toward the end of the early winter of 1832 Louis asked Jackson's name in these words: " What is the name of the young American who attends my visits? I mean the one who discovers everything which I do when I auscult our patients." About this time also on rounds, Louis asked Jackson to come forward to examine the patient. " For," said he " you are great in auscultation." Soon after this they became great friends. They would frequently come out of the hospital and walk home together, for Jackson had become by this time his favorite pupil and warm friend, while Louis treated him as a second son. He very much wished Jackson to pass four more years without engaging in the practice of medicine, and wrote two letters to his father upon this subject, but his father was obdurate so he returned home. Those surely were strenuous days that Jackson passed in Paris. He would follow Chomel at Hotel Dieu an hour and a half before clear daylight, where 200 to 300 pupils were going the rounds at the same time. Then he would visit la Pitie by daylight, and as there were not more than fifteen students who made the rounds he had more

of a chance to examine patients with the stethoscope, being able to see at least six of them. In 1832, before the Society of Medical Observation, he reported an important physical sign in early tuberculosis, or the prolonged expiratory breath sounds which could be heard at an apex as an early sign of tuberculosis. He refers to this in a letter to his father of March 24th, 1832, in the following words:

> "One word more about bronchial respiration. For as much as two months I have made the following remark, and from very frequent observations am quite convinced of its correctness. In some commencing cases of phthisis, when the respiration is not yet truly bronchial under the clavicle; when we still hear the vesicular expansion, and nought else on inspiration, I have discovered the bronchial sound on expiration. In other words, the bronchial expiration may be heard before the bronchial inspiration—it may be heard at an earlier period of the disease, and may thus become a very important sign as making known the disease yet sooner after its origin."

In one of his letters to his father, Jackson writes: "I must indeed work for my bread, but in working if you take from me the interest which search after pathological truth inspires I can no longer work well." Shortly after that he sent his father a manuscript of sixty cases of cholera which he had collected in Paris in April, 1832, in the wards of Andral and Chomel. Thirty of them recovered, but the other thirty were fatal. Later in that year his father had this volume published and a review in the November number of the American Journal of Medical Science calls it "in every respect a creditable performance and an earnest of future distinction." When Jackson left Paris he was given an affectionate letter by Louis along with a bronzed inkstand, with two pieces of marble, one of which was surmounted by a St. Bernard dog bearing a child on its back. Jackson also obtained, before he left Paris, a painting of Louis, executed by the artist Champmartin which Louis had consented to sit for. This painting, on the death of Dr. James Jackson Sr. was presented to the Massachusetts General Hospital. It is now in the Staff Room.

Henry I. Bowditch

Henry I. Bowditch was born in Salem, Massachusetts, on August 9th, 1808. He was a college classmate of James Jackson Jr. and received the degree of M. D. from the Harvard Medical School four years later (in 1832), serving in his last year there as an interne at the Massachusetts General Hospital until the spring of 1832, when he joined James Jackson Jr. in studying under Louis, who welcomed him heartily after his being introduced by Jackson. Bowditch soon became one of Louis' most devoted admirers and followers, finding him "a most careful observer of facts and one who deduces from these facts the laws which regulate disease; also one possessed with a kind heart and a delightfully kind disposition." Louis cared for Bowditch most tenderly when he had an attack of acute rheumatic fever the spring of his arrival, and later Louis allowed him to work at la Pitie in the afternoons, a permission he earlier granted Jackson. After two years and three months in Paris, Bowditch returned to America and showed his admiration for his master and the numerical method by editing a translation of Louis' Phthisis and by translating the latter's two volume work on Typhoid. A few years later he founded the Boston Society of Medical Observation and refounded it when interest in it waned. Finally, when later abroad he showed his love for Louis by making two pilgrimages to Paris to see him again.

Dr. Bowditch served as Admitting Physician to the Massachusetts General Hospital from 1838-1845, then for the eight succeeding years as one of its Visiting Physicians. He served also the Boston City Hospital in a position similar to his second position at the former Hospital from 1868 to 1871, and held the Chair of Clinical Medicine at Harvard from 1859-1867. He became prominent as a Sanitarian and created in Massachusetts the first Board of Health in this country, acting as its Chairman for ten years (1869-1879). His book, The Young Stethoscopist, or the Student's Aid to Auscultation, had a large sale and went through two editions, while his article on Diaphragmatic Hernia was considered a model of its kind. It abstracted all of these cases in the literature from 1610-1846. He firmly believed in soil moisture as the cause of tuberculosis and considered some examples of tuberculosis were contagious. His advo-

cacy of thorocentesis was most emphatic when that procedure was little known and advocated by even fewer physicians. He also was strong in his abolition views when such a stand took courage. He died on January 14th, 1892, when 84 years old.

Oliver Wendell Holmes

Oliver Wendell Holmes after graduating at Harvard in 1829, at the age of 20 years, spent a year at the Harvard Law School but then decided he preferred the study of medicine and transferred his allegiance to a private medical school, where he took two courses of lectures. After this he desired some foreign study, so on March 30th, 1833, he goes to New York to await the sailing of the packet Philadelphia which landed him in Portsmouth after a twenty-three day trip. Shortly thereafter, he journeyed to Paris where he was busy enough during the time he spent there, but saw little outside the hospital and lecture rooms. In fact, years later he wrote: "I devoted myself too exclusively to the teachings of Louis. Many a long and wearing hour I have passed on the stone floor of the autopsy room at la Pitie, wasting my time over little points which, a few years later, would have been easily settled by the microscope." He listened also during his sojourn abroad to "Andral, by far the most eloquent and popular; Broussais, then like an old volcano who has pretty nearly used up its fire and brimstone but is still boiling and bubbling in its interior and now and then sends up a spurt of lava and a volley of pebbles; Lisfranc, who was a great drawer of blood and hewer of members; Baron Larray, a short, square, substantial man with iron gray hair, ruddy face and white apron; the illustrious Baron Dupuytren, square, solid looking man, with a fine head; the vivacious Record, styled by him the Voltaire of pelvic literature; Baron Boyor, author of a voluminous work on surgery in nine volumes; and Velpeau, who looked as if he might have wielded the sledge hammer rather than the lancet."

Returning home in the fall of 1835, he obtained his medical degree from the Harvard Medical School in 1836, and entered upon the private practice of medicine, serving for three sessions as one of the Visiting Physicians of the Massachusetts General Hospital. In 1838 he was "mightily pleased" to receive the appointment of Pro-

fessor of Anatomy at Dartmouth College, and held this position during the years 1839 and 1840, busying himself also during this period in writing for the Boylston and other prizes. His Boylston prize on Intermittent Fever in New England is probably the best known of those prizes which he received, although his essays on Neuralgia and on the Utility and Improvement of Direct Exploration in Medical Practice also received this prize and are worth reading; his paper on Homeopathy is full of his best sparkling wit; his essay on the Contagiousness of Puerperal Fever, which he read in 1843 before the Boston Society of Medical Improvement, gave him an international reputation in spite of his idea of contagion in this condition being refuted by both Hodge and Meigs who were listed among the most prominent professors of obstetrics in this country. This last paper was published in the New England Quarterly Journal of Medicine, which had an ephemeral existence of about a year. It was reprinted however in 1855 under the title " Puerperal Fever as a Private Pestilence." In 1847 he received the appointment of Parkman Professor of Anatomy and Physiology at the Harvard Medical School, but in 1871 the department of Physiology was given a separate professorship. He kept the Professorship of Anatomy however until he retired in 1882. Holmes later obtained, as you all know, great fame as an author, but his poetry, his novels, his essays and his biographies do not concern us in this paper. He died on October 17th, 1894, aged 85 years.

George C. Shattuck, Jr.

George C. Shattuck Jr. was younger by a few years than his other fellow Bostonians. He graduated from Harvard College in 1831 and resembled Holmes in spending the year after his graduation at the Harvard Law School, when he found medicine more attractive and received the degree of M. D. at the Harvard Medical School in 1835. Then, much influenced by the methods, teaching and personality of Louis, he went abroad and kept up an intimacy with him until the latter's death forty years later. His paper on the Differences Between Typhoid and Typhus Fevers, which he read before the Society for Medical Observation in Paris in 1838, I have already referred to. His translation of Louis' work on Yellow

Fever at Gibraltar, published in 1839, should be here recorded. In 1849 he succeeded Oliver Wendell Holmes as one of the Visiting Physicians to the Massachusetts General Hospital, and served in this capacity for thirty-six years, while for almost twenty years he was a professor in the Harvard Medical School, being, from 1855 to 1859, Professor of Clinical Medicine, and from 1859 to 1873, Professor of the Theory and Practice of Medicine. During the years 1872 to 1874 he was President of the Massachusetts Medical Society, and died at the age of 80 on March 22nd, 1893.

Alfred Stille

Alfred Stille, a Philadelphian like Gerhard, was born there on October 30th, 1813, and entered Yale in the Class of 1832, but was obliged to leave there with half the class on account of a conic section rebellion. Four years later he was graduated with the degree of M. D. from the University of Pennsylvania, and was fortunate in that year in securing a House Physicianship at the Philadelphia Hospital under Doctors W. W. Gerhard and Casper W. Pennock who had come back not long since from studying under Louis. They soon made him a zealous convert to the school of observation and probably were the cause of his going to Paris at the end of his hospital service to study under their old master. He had come from Philadelphia when fresh from the study of the differences of typhoid fever from typhus fever under Gerhard, and he clearly showed this distinction, as I have previously written, before the Society of Medical Observation on September 14th and 28th, 1838. Returning after two years of study, he practiced in Philadelphia, wrote for medical journals, taught students pathology and medicine and wrote a treatise on pathology, becoming well known by these accomplishments. In 1854 he was elected to the Chair of Practice of Medicine at the Pennsylvania Medical College, and succeeded Dr. Pepper (primus) to the same Chair at the University of Pennsylvania ten years later. He was intensely interested in his profession and in his fellow practitioners, being the first Secretary of the American Medical Association and in 1867 its President. He also held local offices and was President of the Pathological and County Medical Societies, as well as finally, in 1885, of the College of

Physicians. Besides a goodly number of medical articles, he was the author of two well known monographs on Cholera and Cerebrospinal Meningitis, as well as two magna opera, Materia Medica and Therapeutics, and the National Dispensitory. He died in Philadelphia on December 24th, 1900, aged 87 years.

William Power

William Power seems to have been Louis' only student from Maryland, but his presence alone amply compensated for the lack of others. He was graduated from Yale with the degree of A. B. in 1832 (being a classmate of Alfred Stille), and from the University of Maryland with the degree of M. D. in 1835; then he spent five years at Paris studying mostly under Louis. Shortly after returning to Baltimore, he became physician to the Almshouse and lecturer on Physical Diagnosis at the University of Maryland, succeeding in 1846 Elisha Bartlett as Professor of Practice at the same University. At the age of 39, in 1852, he died a victim of tuberculosis, but the interest in the new scientific medicine with which he had inspired his students and associates was continued by my father's friend, his brother-in-law, Charles Frick, who fell a victim to diphtheria from an operation he performed on a colored woman a patient of his in the Baltimore Infirmary in 1860. He too died too young, as his life's career was ended at 37. In a letter Power wrote to Elisha Bartlett in 1842, he shows he appreciated the difference between typhoid and typhus fevers as shown by Gerhard and realized a recovery from one would produce an immunity upon the individual attacked by the disease but not from the other disease—in other words, the immunity was a specific and not a crossed immunity. As I write I have a printed copy of Power's Introductory Address before his first class as Professor of Medicine. He writes in this Address: "Though a man may be born a poet, he never is born a physician," and showing the benefit of his instruction from Louis, he adds: "The physician must be made, and he must make himself by devoted study and observation–. A teacher gives a course of systematic lectures on the theory and practice of medicine to prepare his hearers to observe for themselves the actual phenomena of disease. The great bane of medicine is the mania for theorizing, draw-

ing hastily from real or assumed facts unwarranted general conclusions." Later he speaks of Broussais at the beginning of the 18th century observing at first by careful and philosophical investigation facts, only later to cease observing and to take to theorizing, but the seed he scattered fell on good ground and formed the modern school of medical observation. In this school he names Corvisart, Laennec, Bichet, Lallemand, Biett, Andral, Chomel, Louis and Grisolle, and mentions others in England, among them being Bright, Cheyne Stokes, Gravies, Williams and Watson, while in America he mentions among the true disciples of the school of observation, Jackson of Boston, Ware, Bigelow, Shattuck, Johnson, Swett, Gerhard, Jackson of Philadelphia, Stewardson, Pennock and Geddings. He advises his students to read Bartlett's Philosophy of Medical Science and states that he will combine his systemic lectures with a course of clinical instruction in the wards of the infirmary. "This is the only way in which the practice of medicine can be taught. It is the experimental method added to the study of disease. It will allow us to teach you to observe for yourselves which we have said was the only mode of arriving at truth." He finally advises them to learn to observe which, more than anything else, will enable them to take their place at once at the bedside, conscientiously prepared to fulfill the great duties of their profession.

There were others of Louis' pupils who reached distinction, but these seven remain and will remain among the great names in American Medicine.

MEDICAL HISTORY IN CLINICAL TEACHING *

WILLIAM G. LEAMAN

Woman's Medical College of Pennsylvania, Philadelphia, Pa.

The curriculum of the modern medical school has reached the limit of its expansion. Recent advances of the past decade have served to completely close in the few remaining gaps of leisure time that may have remained in the possession of the undergraduate. From the beginning of the first year until the day of graduation the student is constantly confronted by an endless procession of facts, names, formulae and theories—a formidable host of seemingly unrelated data. If successful, in four years he is the proud possessor of a storehouse of knowledge of medicine of to-day. But what of yesterday? In our struggle to fill each lecture with all the material it will hold and to use each working hour of the school year to the utmost advantage we are pushing into the background and even threatening to crowd off the stage altogether the orphan in the medical school curriculum—Medical History.

Neglected by most students in their quest for what they consider to be knowledge of a more practical nature the medical history hour tends to be viewed as an official holiday. Yet if earnestly undertaken the study of the history of medicine never fails to supply the much needed unifying factor. It links the past with the present and invites speculation as to the possibilities in the future. Properly presented it can act as a stimulus to thought and endeavor. Its greatest value to the student of to-day is the solid foundation it forms upon which can be built a system of ethics.

During the past six years at the Woman's Medical College of Pennsylvania, the writer has given a series of lectures on the History

* Dr. Leaman's presentation of his moving picture was received with great interest. Unfortunately, for technical reasons it was not possible to include more extensive reproductions from the film in this paper. We had to limit ourselves to the pictures showing some of the personalities as represented in the film. Dr. Leaman has informed us that persons interested in any of the scenes could obtain copies from the Eastman Company of Philadelphia who have the negatives of the original.—*Editor.*

of Medicine to the second year class comprising the first seven weeks of a course listed in the college catalogue as "Introductory Medicine." These lectures represent the first contact the student has with the Department of Medicine. We introduce Medical History here because we believe the best introduction to medical science (or any science) is a brief outline of the history of its development. In this short time it is obviously impossible to do any more than paint the main trends in medicine's development in broad strokes. Few digressions from the main stream are possible. We have found the syllabus recently published by Sigerist most useful, particularly the carefully selected book list for student reading. Our classes at the Woman's Medical College are small; consequently the seminar method is convenient. The hour is divided into three parts. During the first part of one half hour the formal lecture is given. During the next 15 minutes lantern slides are shown consisting of the usual photographs, manuscripts, etc. The final 15 minutes is given over to a discussion of the books relating to the subject of the lecture and the student is urged to become familiar with them. By-ways of investigation are pointed out and questions pertaining to the lecture are answered.

So far, our course as I have outlined it to you differs but little from the type given in many medical schools in our country. By this time you are no doubt wondering what we have in our course at the Woman's Medical College that warrants my appearance at this point in the program. We have always believed that lack of interest in the medical history course was at least in part due to the one selected to present the subject. Lack of enthusiasm, interest and care in the selection of material on the part of the lecturer is always promptly reflected in a falling off in the attendance. For this reason we have sought to relieve the monotony of the slides by the insertion in appropriate places of short motion picture films. Since we could not procure suitable films we had to make them ourselves. With the aid of a local theatrical company and patients of suitable types selected from our clinics some acted scenes from the lives of well known medical characters were attempted. The reels I will now show have been prepared especially for this society and are made up from excerpts from the various films now used as part of our teaching equipment.

With the aid of the Department of Physical Diagnosis we first attempted to portray methods used by Hippocrates in the detection of disease. A film was made of Hippocrates in the Temple (200 feet of 16 mm. type) and was first used in the second lecture of the course covering Medicine in Ancient Greece. The success of this venture stimulated us the next summer to attempt some scenes from the life of William Harvey (Figure 1). This was a rather large

Fig. 1

WILLIAM HARVEY

assignment and available funds seemed to melt away. However, the film was completed by Fall and in addition to using it in the course on Medical History we inserted parts of it, by way of introduction, in another film of a technical nature, showing a direct method of determining venous pressure. This, of course, suggested the work of Rev. Stephen Hales; so the next season we collected our forces (and Funds) and constructed a bit of Teddington-on-the-Thames near the chancel steps of a local Episcopal Church (by-the-Schuylkill) (Figure 2).

The next step was to complete as far as possible the history of physical diagnosis; so before long two unemployed property men were at work constructing "An Inn in Austria." Publication in the *Bulletin of the Institute of the History of Medicine* of Forbes' translation of Auenbrugger's original treatise with an introduction

Fig. 2

Rev. Stephen Hales

by Sigerist about this time helped us to get on firmer ground. Encouraged again by the amount of enthusiasm and cooperation we finished the film the next year including indoor and outdoor scenes from the life of Laennec (Figure 3).

The addition of these various motion picture films to our lecture material stimulated interest in the course in medical History. Even

Fig. 3

LAENNEC

with the hour shifted to 8 A. M. during the past two years the attendance has been close to 100%; so we believe the films have served their purpose well. In addition, we believe that they have been of inestimable value to the subject matter of medical history in that they have afforded us a means of harmlessly spending our enthusiasm. If we had used another vehicle of expression—the written word—and taken the same liberties and made the same mistakes no little harm might have been done. Another horror in the form of a book might have appeared.

SIR ANDREW MACPHAIL

UNIV. OF MICH.

SIR ANDREW MACPHAIL

Sir Andrew Macphail, an honorary member of our Association, died at Montreal on 23 November, 1938, aged 74. Though professor of the history of medicine at McGill University for 30 years, from 1907, it was as a man of letters, one of the most distinguished that Canada has produced, that he was best known. Born at Orwell, Prince Edward Island, in 1864, this remained his summer home and favorite haunt throughout his life. His Scottish grandfather had landed there, wrecked, with a copy of Horace that gave him his livelihood, and the grandson at 18 became "principal" of a neighboring one-man school. In three years he saved enough to continue his grandfather's interrupted journey to Montreal. Here he worked as a reporter while putting himself through McGill (B. A. 1888, M. D. 1891). After study abroad he was appointed professor of pathology at Bishop's College, Montreal, and when that medical school was absorbed, McGill's early professorship of the history of medicine was created to give him a seat in the composite faculty. If his interest in the subject was academic and his publications on it few, his lectures were stimulating and well attended. They were philosophical rather than biographical and covered a wide field. Groups of interested students were constantly entertained, Socratically and otherwise, at his house where among many extra-curricular embellishments they absorbed some tincture of the Greek language and literature.

For years Macphail had limited his medical practice almost entirely to life insurance work. He is remembered by the canning industry for a useful early investigation, chemical and bacteriological, of the lobster fisheries of his native province. But it was in journalism that he best served the profession, as editor of the *Montreal Medical Journal* and its successor, the *Canadian Medical Association Journal*, both of which he put on a very high plane of usefulness. His respect for words was uncompromising. Once when leaving for his Island home he handed me some papers for the Journal, with instructions

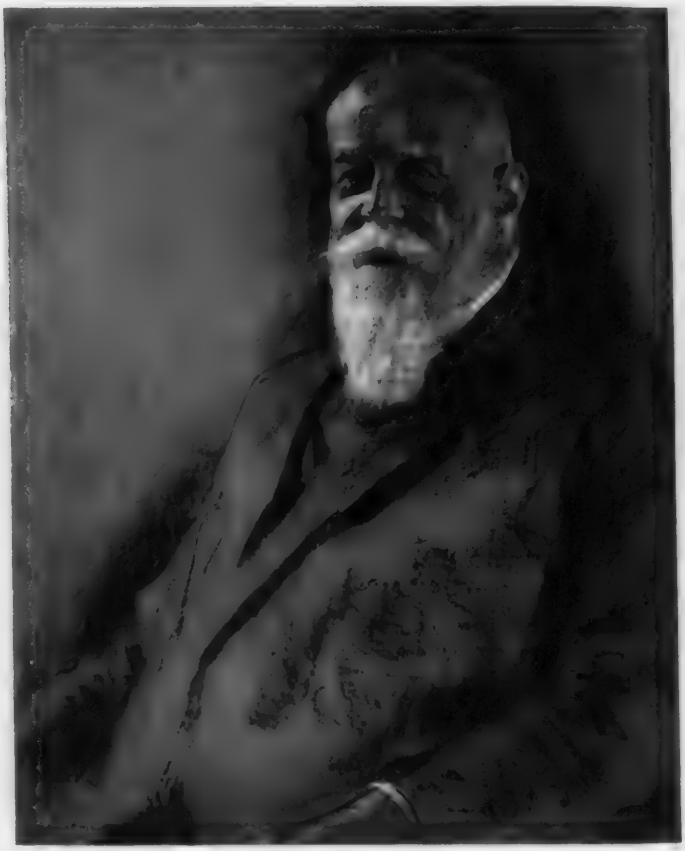
to alter the title of one by a prominent surgeon. "The scaphoid abdomen, yes; the pendulous abdomen, yes; but 'The acute abdomen'—*no*!" I feared the surgeon more than the editor, and left it angular.

In 1918 he was knighted, largely for his distinguished service in the war. When over 50 he spent three years in the thick of it at the front with a Canadian field ambulance. In 1917 he gave the Cavendish Lecture in London, his subject "A day's work"—the battle of Vimy and the efficiency of the medical corps. Later he compiled the medical volume, 1925, of the Canadian official history of the war. In this he handled some prominent bunglers without gloves; he wrote, he said, "as though everyone . . . in it were dead. I have found that they were not dead." His wounds he ironically received in civil life, damaged eyesight from an accident, and a nearly fatal bullet from a madman in 1921.

He wrote some novels, "The vine of Sibmah," &c., but his favorite vehicle was the essay. Of these he published several volumes, "Essays in Politics," "in Puritanism," and "in Fallacy." For many years he edited an excellent quarterly, the "University Magazine." Other works are "The Bible in Scotland"—he had a strong religious bent, a life of John McCrae (of "Flanders Fields" fame), and some biographical studies, "Three persons," in the modern critical fashion. The opening sentence of one of these, on General Wilson, is a good example of his epigrammatic and often provocative style—"The Irish have always had a sure instinct in murder." His speeches and conversation were a delight, larded with pithy paradoxes, and he would say the drollest things with the most melancholy countenance.

He leaves a son, daughter, and grandchildren. The loss of his wife in 1902 was an abiding sorrow. A man of means, he did his utmost to encourage literature, music, and the drama in the community. A useful citizen and a lovable friend.

W. W. Francis.



KARL SUDHOFF

UNIV. OF MICH.

KARL SUDHOFF, 1853-1938

Karl Sudhoff was born on November 26, 1853, in the old city of Frankfurt-am-Main, the son of a Protestant minister. When the father retired, the family moved to Zweibrücken, later to Kreuznach where Karl Sudhoff graduated from the Gymnasium. It was one of those old-style German humanistic Gymnasiums where the young people received a thorough classical training. At the age of 18 Sudhoff entered the University of Erlangen. His teachers expected him to become a philologian as he was particularly well-versed in Germanic languages and literature, but being keenly interested in science also, Sudhoff matriculated in the medical faculty. As a young medical student he already began to devote much time to the history of medicine, and he felt particularly attracted by the Middle Ages and the then almost mythical figure of Paracelsus. After graduation from the University of Erlangen and three years of clinical work in Augsburg and Vienna, Sudhoff settled down as a general practitioner, first in Bergen, near Frankfurt, then from 1883 on in Hochdahl, near Düsseldorf.

For 22 years he lived the life of a busy general practitioner in an industrial center, visiting his patients on horseback, but he devoted every free moment to studies in the history of medicine. During that period his work centered almost entirely around Paracelsus. He intended to write a comprehensive monograph on the life and work of the great German physician, and began collecting his books. But he soon realized that biography and bibliography of Paracelsus were utterly confused and that more preliminary research would be necessary. As a result of these early studies Sudhoff published two pamphlets, written in collaboration with Eduard Schubert, dealing mostly with the biography, and two large volumes, the bibliography of the manuscripts and printed editions of Paracelsus.

The year 1898 marks a turning point in Sudhoff's career. So far he had led the studious life of a practitioner and scholar. In 1898 the *Gesellschaft Deutscher Naturforscher und Aerzte* had its annual convention in Düsseldorf and Sudhoff organized an exhibit illustrating the history of medicine and science in that region. From then

on he was called upon whenever and wherever medical history was cultivated. In 1901 the German Society of the History of Medicine and Sciences was organized in Hamburg, and Sudhoff was elected its first president which he remained for over 30 years. At the same time a journal, the *Mitteilungen zur Geschichte der Medizin und der Naturwissenschaften* was founded and Sudhoff was editor of its medical section, again for a long number of years. To this journal he contributed thousands of reviews. In cooperation with Hugo Magnus he launched a series of short monographs, the *Abhandlungen zur Geschichte der Medizin* of which 18 numbers were published from 1902 to 1906.

The year 1905 marks a second turning point in Sudhoff's life, when he was appointed to the newly established chair of the history of medicine at the University of Leipzig. He gave up his practice and began his academic career at the age of 52. He organized the Institute of the History of Medicine, the first research institute ever established in the field, and developed it from modest beginnings into a research center of world reputation. At the same time he founded a new journal, the *Archiv für Geschichte der Medizin*, a new series of monographs, the *Studien zur Geschichte der Medizin*, and a series of medical classics, *Klassiker der Medizin*.

In the 20 years while Sudhoff was in active charge of the Institute, he worked feverishly and published not fewer than 14 books and 501 papers. His starting point had been Paracelsus whose thought he found rooted in the Middle Ages. From 1905 on Sudhoff's researches were mostly devoted to mediaeval medicine, and his chief contribution undoubtedly is that he made hundreds of hitherto unknown texts available. In the history of early mediaeval medicine he continued the work of Charles Daremberg and Valentin Rose and contributed about 20 papers to the history of that period among which one on the history of the *Capsula Eburnea* is particularly important. He was also instrumental in launching the *Corpus Medicorum Latinorum*, published as a parallel series to the *Corpus Medicorum Graecorum*.

His chief contribution to the history of the Salernitan school was the publication of the *Codex Salernitanus* of the University Library of Breslau which contains many Salernitan medical texts that had

never been edited before. Sudhoff had most of them published in dissertations of his students. He felt also particularly attracted by the medical illustrations of mediaeval manuscripts, and devoted a large number of papers and several monographs to studies of the anatomical, surgical and obstetrical illustration in which he traced the developments from antiquity through the Middle Ages to the Renaissance. Another important contribution was his emphasis on the importance of the Consilia and Regimina. Textbooks give only a very inadequate view of medical practice, while the Consilia show the doctor acting in a definite case. The Regimina, on the other hand, give evidence of the survival and development of Greek diatetics.

Sudhoff devoted much work to the history of the two great epidemic diseases that played such an important part in the life of the Middle Ages: leprosy and the plague. He published several manuals for the examination of lepers and ordinances regulating their lives, and he edited in many volumes of the *Archiv für Geschichte der Medizin* a large number of plague treatises written at the time of the Black Death. These studies led him to others on the history of hygiene, public health, and hospitals in the Middle Ages.

Sudhoff's work was by no means restricted to the Middle Ages. He participated in the controversy as to the origin of syphilis, while his study on Iatromathematiker (Breslau, 1902) or astrological medicine extended over the sixteenth as well as the fifteenth century. He was greatly interested in Greek medicine also, and collected and published papyri with medical content. A study trip to the island of Cos resulted in a very charming monograph *Kos und Knidos*. In later years Sudhoff returned to his studies on Paracelsus and published his scientific and medical works in 14 volumes. The great monograph that he originally planned was never written, because Sudhoff had primarily an analytic mind. He was at his best when he could publish and analyze a text. His *Kurzes Handbuch der Geschichte der Medizin* is remarkable not for any broad historical concept, but for the detailed information and bibliographic references it contains.

Sudhoff was for many years the undisputed leader of medical history, and it is largely due to him that the subject found recogni-

tion in the universities. He was an outspoken personality, a *Lehrernatur* as he liked to call himself, violent in his sympathies and antipathies. A hard worker, he pursued his studies with the same vigour after his retirement in 1925, and until his death which occurred on October 8, 1938. Many honors came to him during his life. He was an honorary doctor in philosophy of the University of Breslau, an honorary doctor of veterinary medicine of the University of Leipzig, an honorary member of many learned societies, and many foreign governments awarded him high decorations.

HENRY E. SIGERIST.

ALFRED OUGHTON LEE, M. D.

Professor of Modern Languages and of the History of Medicine
University of Michigan, 1873-1938.

UNIV. OF MICH.

ALFRED OUGHTON LEE

Dr. Alfred O. Lee, Professor of Modern Languages and of the History of Medicine at the University of Michigan, died December 25th, 1938, after a protracted illness. He was 65 years of age, and had served the University for over thirty years, during which time he was well known to both faculty and students as one of its most loyal and devoted teachers.

Born in Chicago in 1873 from a line of physicians dating back several generations, his education was a combination of the study of medicine and of foreign languages. His preparatory work, following a three year period in Chicago, was done in the Gymnasium at Heidelberg. Following this he entered the University of Berlin, from which he received his Master of Science degree in 1894 and the degree of Doctor of Medicine in 1898. His doctoral thesis, which was published, dealt with the bacteriological causes of endocarditis. Following this, he was engaged for several years as the medical editor of Webster's new international dictionary and as medical biographer for the international encyclopedia. He spent two years teaching German at Purdue University, following which he came to the University of Michigan in 1906 as instructor in German.

During his thirty year period at the University of Michigan promotions came in regular sequence, and he was appointed Professor of Modern Languages in 1924. In 1938, because of his intense interest in the history of medicine, his title was changed to Professor of Modern Languages and of the History of Medicine.

Dr. Lee emphasized the history and social side of medicine in his teaching. This work he gave in the program of the sociology department, and for it enlisted the aid of a number of the medical faculty. His enthusiasm for languages as such never rose to the high point that it did for the history of medicine. The men whom he held up as his ideals were medical men of the type of Pasteur, Koch, Lister, Osler, and others more ancient or recent. He made his subject alive and stimulating, and his students fairly worshipped him. His lectures, illustrated with well-chosen lantern slides, were given with much vigor and true enthusiasm, and here his personality stood out

in full relief. Such lectures could not but leave a lasting effect on his students. Following completion of a class in February, 1938, he was presented with a bound brochure of essays on various topics by his students, who wrote of him at that time as "the Father of Premedical Students" who "has cultivated in our minds a healthy appreciation of the true cultural and scientific aspects of medicine." He continued this work up to the very end, when his illness had weakened him so that he could hardly get to the classroom. The last lecture was given from his sick-bed two weeks before he died. His last great desire was that the University would establish a chair in the History of Medicine.

Physically Professor Lee was a robust person with a fine physique. He was over six feet tall and his weight and build were in proportion. He was intensely interested in athletics, and was a member of the Board of Athletics of the University for eleven years. He was especially skilled in tennis and skating, and was a familiar figure skater on the rink, and also spent much time on the University tennis courts, where he often served as a voluntary coach.

It has been said of Dr. Lee that in everything he undertook he sought to reach perfection, and attained it as nearly as falls to the lot of most mortals. Skillful in games, a master of languages, learned in medical history, he was a stimulating teacher and a valued friend. His life will endure as an inspiring memory to all those who were privileged to know him.

KYRIL B. CONGER, M. D.

THE BOSTON MEDICAL HISTORY CLUB

Brief history:

On May 31, 1921 a meeting was held in Sprague Hall at the Boston Medical Library for the purpose of organizing, "The Boston Medical History Club." Dr. Malcolm Storer called the meeting to order and Dr. Cecil Drinker acted as temporary Chairman. It was unanimously voted to elect the following officers for the year 1921:

President	Harvey Cushing
Vice-President	Joseph W. Courtney
Secretary-Treasurer . .	Edward C. Streeter
Librarian	James F. Ballard
Executive Committee . .	Malcolm Storer, John W. Farlow

The first regular meeting of the Club was held in the Oliver Wendell Holmes Hall at the Boston Medical Library on October 20, 1921 at 8.15 p. m. and was called to order by the President, Dr. Harvey Cushing. The program consisted of a paper by Dr. Henry R. Viets on Nicolaus Cusanus and an Exhibition of Pare's six books on Surgery by Mr. Ballard. The members present at this first meeting were: J. F. Ballard; J. W. Bartol; Harold Bowditch; David Cheever; A. L. Chute; I. H. Coriat; W. P. Coues; J. W. Cummin; Harvey Cushing; J. E. Donley, Jr.; J. W. Farlow; R. M. Green; Reid Hunt; Timothy Leary; J. H. Means; J. H. Pratt; L. Reynolds; G. Sarton; M. C. Smith; H. R. Stedman; Malcolm Storer; E. C. Streeter; E. W. Taylor; P. E. Truesdale; Henry Viets.

The former Presidents of the Club were:

1921 —Harvey Cushing	1928-31—E. W. Taylor
1922-24—John W. Farlow	1931-33—Charles F. Painter
1924-26—J. W. Courtney	1933-35—Henry R. Viets
1926-28—Fred B. Lund	1935-37—Lincoln Davis
1937-39—Paul D. White	

The former Secretaries of the Club were:

1921 —E. C. Streeter	1924-28—H. R. Viets
1922-24—J. W. Cummin	1928-35—J. F. Ballard
1935-39—Benjamin Spector	

During the past eighteen years, since the establishment of the Club, the character of the programs has eminently satisfied the cultural needs of the profession. The subjects ranged from exhibitions of books, coins, medals, etc., to discourses and medical historical pageants.

Membership—there are one hundred and four paid members in this Club some of whom are undergraduates.

Dues—two dollars annually.

Meetings—are held on the third Monday evening during the months of November, December, January, February, March and April.

Publications—papers presented at these meetings are frequently published in the Annals of Medical History, Isis, Bulletin of the Institute of the History of Medicine, Bulletin of the Medical Library Association.

Delegate to the Council of the A. A. H. M.—Benjamin Spector.

Program for 1938–1939

November 21—"Honestly Do We Teach as Well." Reginald Fitz, M. D.

December 19—"On the Development of Our Knowledge of the Diseases of the Ear." Francis L. Weille, M. D.

January 16—"On the Development of Our Knowledge of the Diseases of the Eye." Edwin B. Dunphy, M. D.

February 20—"On the Development of Our Knowledge of the Diseases of the Teeth." Leroy M. S. Miner, M. D.

March 20—"Something Wrong With The Guts." A. Warren Stearns, M. D.

April 17—"The Darkest Days of Surgery." Elliott C. Cutler, M. D.

Present Officers

President—Paul D. White

Vice-Presidents—George R. Minot, John Homans, Alex. S. Begg

Secretary-Treasurer—Benjamin Spector

Curator—James F. Ballard

Council—Henry R. Viets, Lincoln Davis, Soma Weiss

BENJAMIN SPECTOR

THE JOHNS HOPKINS MEDICAL HISTORY CLUB

The Johns Hopkins Medical History Club was organized by William Osler in 1890—that is, one year after the opening of the Johns Hopkins Hospital. Since that time it has held regular sessions and will celebrate its 50th anniversary next year.

For many years the Club met in the hospital itself; after the establishment of the Institute of the History of Medicine, however, it was found more convenient to have the meetings in the Institute. This had the advantage of making the facilities of the Institute available to the Club. The secretarial work could thus be handled by the Institute more conveniently. Exhibits are arranged in connection with the topics of the meetings and informal receptions are held after the end of the official program.

In 1936 a reorganization of public medico-historical activities in Baltimore took place. Since there are three medico-historical clubs in the city the necessity of coördinating their activities was felt. Whereas the Johns Hopkins Medical History Club used to meet nearly every month of the academic year, the number of meetings was now changed to a maximum of four. There are no membership fees or statutes in the Johns Hopkins Medical History Club. Every year a president, vice president, and secretary are elected by the persons present at the meeting. After the Club joined the American Association of the History of Medicine as a constituent society, the number of elected officers was increased by a delegate.

During the current academic year the following activities have taken place in the Club:

The first meeting was held on November 14, 1938, in which those members of the Institute who had been abroad during the summer told about their experiences and gave an account of current medico-historical activities in Europe. The following papers were read:

"A Hectic Summer in Italy," by Dr. John R. Oliver

"Impressions of the International Congress of the History of Medicine in Yugoslavia," by Dr. Owsei Temkin

"A Boerhaave Pilgrimage in Holland," by Dr. Henry E. Sigerist.

In the following business meeting Dr. Warfield T. Longcope, Professor of Medicine, was elected president, Dr. Nicholson J. Eastman, Professor of Obstetrics, vice president, and Dr. Henry E. Sigerist, secretary of the Club. Dr. Henry Barton Jacobs was made honorary president. The Club also resolved to join the American Association of the History of Medicine as a constituent society and Dr. Owsei Temkin was appointed to serve as delegate.

The second meeting took place on February 13, 1939. The evening was devoted to the subject of anatomy and Dr. George W. Corner from the University of Rochester and Dr. Howard B. Adelmann from Cornell University had been invited to address the Club. Dr. Adelmann spoke on " The Embryological Treatises of Hieronymus Fabricius ab Aquapendente," and Dr. Corner on "Anatomical Illustration and the Fine Arts." In connection with the meeting an exhibit of anatomical illustrations and of the works of Fabricius of Aquapendente was arranged by Dr. Larkey in the Exhibition Hall of the Institute.

The third session was held in honor of the members of the Second Graduate Week in Medical History. Dr. Sanford V. Larkey presented " The Black Dart of Death," a play which he had adapted for the stage from William Bullein's "A Dialogue against the Fever Pestilence" published in 1564. The play served as a dramatic illustration of " Medicine in the Renaissance " which formed the subject of the second graduate week. The cast had been chosen from among students and persons connected with the Johns Hopkins Medical School.

The attendance increased from c. 75 at the first meeting to c. 120 at the second and 460 at the third meeting.

OWSEI TEMKIN

THE CORDELL HISTORICAL SOCIETY OF THE UNIVERSITY OF MARYLAND

The University of Maryland Historical Society was founded in 1936 and held its first meeting on January 19, 1937. The name of the society selected was The Cordell Historical Society of the University of Maryland. The organization was named after Dr. Eugene Fauntleroy Cordell, a graduate of the University of Maryland, a distinguished physician of Maryland and one of the outstanding medical historians of the state at the turn of the century. Quoting from the constitution of the Society, "The purpose of this Society shall be to study the history of medicine, particularly in Maryland and to disseminate and perpetuate interest in the subject by addresses and discussions at its meetings." Since its inception the Cordell Society has held regular meetings in the autumn and in the spring and in January it has served as the host of the Osler Historical Society of Baltimore and also the Institute of the History of Medicine of the Johns Hopkins University and many members of these sister organizations have attended the January meeting. In the spring and autumn meetings of the Cordell Society addresses are given relating to the history of medicine in general. In the January meeting, when the three organizations meet together in the Chemical Hall of the University of Maryland, a speaker is selected who will discuss some subject of medical history of special interest to Marylanders. The Council of the Cordell Society feels that this is fitting and proper, as in the room where we meet the University of Maryland conferred upon the dashing General Lafayette, the degree of Doctor of Laws and the degree of Doctor of Medicine upon the famous ovariotomist, Ephraim McDowell. This amphitheater is replete with medical history and much inspiration in the subject can be gained from gleaning the early records of this venerable medical school.

Our meetings are well attended and the subject matters discussed enthusiastically received by the members of the faculty, the student

body and a large group of citizens who avail themselves of the privilege of attending the Cordell Society meetings.

JOHN C. KRANTZ, JR., *President*

Program for the academic year 1938–1939

January 11, 1939—" Interesting Personalities on the Faculty of the University of Maryland between 1830 and 1870." J. M. H. Rowland.

April 25, 1939—" The Influences Exercised by Conventional Medicine on the Beginning of Autonomous Dental Education." J. Ben Robinson.

" The Friendship of Christopher Wren and Robert Boyle." Ruth Musser and John C. Krantz, Jr.

MEDICAL HISTORY CLUB OF CHARLESTON

The Medical History Club of Charleston, S. C. has completed its thirteenth year of existence. It holds eight to ten meetings each year. The membership is about twenty, being somewhat variable, and the meetings are held by invitation at the residences of the members. The Club has no regular officer, except the Secretary, who appears to continue in office as long as his behavior is satisfactory. The Club has no dues but makes an occasional assessment. Its meetings are informal. They are held at 9 p. m. on the first Thursday of the month and consist of the reading of one or two papers, which are discussed by the members, who later adjourn to a buffet supper.

The Medical History Club of Charleston has continued its regular monthly meetings at the residences of various members during the year 1938-39. The membership remains about twenty, and meetings are well attended by members and guests.

The program of the year was as follows:

October—" History of Roper Hospital." Dr. G. McF. Mood.
November—A brief biography by each member.
November—Address by Dr. J. H. Gibbes of Columbia (Special luncheon, Fort Sumter Hotel)
December—" History of Collapse Therapy." Dr. W. A. Smith.
January—" Contributions of the Vienna School to Modern Medicine." Dr. F. E. Kredel.
February—" Phrenology." Dr. O. B. Chamberlain.
March—" Yellow Fever in Charleston." Dr. Leon Banov.
April—" Stars that Shone in the Night " (Mediaeval Medical figures). Dr. Robt. Wilson.
May—" Notes on the Background of Medical Education in America." Dr. W. H. Kelley.

J. I. WARING

THE INDIANA ASSOCIATION OF THE HISTORY OF MEDICINE

The Indiana Association of the History of Medicine was organized February 15, 1938. There are twenty-one charter members of whom nine are physicians and the remainder librarians and interested laymen. Doctor Edgar F. Kiser was elected president and Mrs. Irene M. Strieby secretary. It was voted to hold meetings quarterly.

Dr. William N. Wishard, Jr. read a splendid biography of Edward Jenner at our organization meeting.

It is the hope of the organization that in due time it will be possible to obtain funds to publish an adequate History of Medicine in Indiana. There have been sporadic efforts in the past to obtain such a publication, but none have materialized. A history published by Dr. G. W. H. Kemper of Muncie, Indiana, some twenty years ago was merely a compilation of short biographies of pioneer physicians. More recently, Dr. Leon Zerfas has published a number of interesting historical papers in the Journal of the Indiana State Medical Association, but Dr. Zerfas is now studying abroad and there is a question as to whether or not he will continue his activities in the History of Medicine upon his return to Indianapolis.

Dr. James Brian Maple of Sullivan, Indiana, is the historian of the Indiana State Medical Association. We feel that we may be assured of the interest and support of both Dr. Zerfas and Dr. Maple in the event that a serious historical publication is undertaken.

Since our state has the privilege of claiming John Shaw Billings as a native son, it is fitting that we give due regard to the history of medicine and feel that we are now on the way to such accomplishment.

The next meeting, to be held on May 17th, will be addressed by Dr. F. B. Peck of Indianapolis, his subject being " The Development of Inoculation and Vaccination Against Smallpox in the United States." The paper is timely as we have had an epidemic of smallpox in Indiana during recent months.

EDGAR F. KISER, *President*

THE INNOMINATE SOCIETY OF LOUISVILLE, KENTUCKY

In 1924 and in 1925 a rather large group of young doctors started in private practice in Louisville. Some of these were natives of the city and others came from distant cities. It was natural that there should be a community of interest among them. A part of this interest was associated with medical things which were non-scientific in nature, such as medical history, the biography of famous doctors, etc. Many of their discussions ranged around such subjects. Finally, the idea occurred to members of this group to organize into a Society for the study of medical history. A few of the younger doctors who—it was felt—were interested, were invited to join in this organization. The organization was finally consummated with great enthusiasm and the first meeting was held on February 9, 1926. The charter members of this organization were as follows:

Dr. J. C. Armstrong
H. G. Barbour
J. T. Bate
J. C. Bell
J. D. Hancock
S. E. Johnson
Dr. J. Murray Kinsman
W. C. Martin
C. McNeill
H. V. Noland
T. C. Smith
R. G. Spurling

Because some of the men wanted to combine the scientific with the historical side of medicine, a compromise was effected whereby a short paper dealing with the scientific subject preceded the main essay of the evening which was to deal with a medical historical or biographical subject. This policy has been followed ever since, excepting that occasionally some of the members prefer to make a short talk on something historical rather than on a scientific topic. The meetings are held on the second Tuesday of each month and are dinner meetings. Our last meeting on April 11, 1939 was the 111th meeting since the Society was organized.

For several months after the Society was organized, discussion raged concerning a name for it without any decision being made. Finally, one of the members, Dr. John Bate, suggested that, in view

of the difficulty in naming the organization, we call it the Innominate Society. This name caught our fancy and was therewith adopted.

We make it a custom to have one outside speaker a year. Several prominent men have been included on this guest list and among these speakers were: Professor Chittenden of Yale, Dr. William A. Pusey of Chicago, Dr. Charles Moore of Cincinnati, Dr. Larsan Brown of Saranac, New York, Dr. Walter Alvarez of Rochester, Minn., Dr. Logan Clendening of Kansas City, Dr. Eckstein of Cincinnati, Dr. Francis R. Packard of Philadelphia, Dr. Leslie B. Arey of Chicago and others. All the essayists have avoided, entirely, clinical papers. In the past year the following titles have been given: "Phrenology," "Father Damien," "Cholera," "Oliver Goldsmith," "Robert Lawson Tait," "Early Egyptian Medicine," "The Royal Society," and "The Resurrectionists." Other interesting titles at various times have been presented. These include: "The History of Trimethyldioxypurine (Coffee)," "Medical Folk-lore," "Tattooing," "Causes of Death of Famous Men," "Dr. Guillotine," "Hypnosis," "History of Bundling," "Medical History of the Panama Canal," and "Early American Medical Education." Papers of local interest included: "Rafinesque," "J. Lawrence Smith," "University of Louisville Medical Traditions," "Horace Holley and Transylvania University," and "Kentucky's Early Lithotomists."

A few of our members have transferred to other cities. One of the charter members, Dr. T. Cook Smith, died in December 1937 and the talk given by our guest annually is now called the "T. Cook Smith Memorial Oration."

Our membership has grown from the original twelve to its present twenty-eight members. Of all the meetings in Louisville, the Innominate Society holds the record for attendance and enthusiastic attendance at that.

PRESENT ROSTER

Dr. Irvin Abell, Jr.
C. J. Armstrong
S. Spafford Ackerly
John Bate
Dr. Joseph C. Bell
Benjamin L. Brock
Harry S. Frazier
Arnold Griswold

Dr. J. Duffy Hancock
M. J. Henry
Sidney E. Johnson
W. O. Johnson
J. Murray Kinsman
Hugh Leavell
Hampton Lawson
Curry Martin
Dr. Clayton McCarty
Clyde McNeill
A. J. Miller
Hulbert V. Noland
Winston U. Rutledge
Uly H. Smith
R. Glenn Spurling
Malcom Thompson

Out-of-Town Members

Dr. Henry G. Barbour, Yale Univ., New Haven, Conn.
Geo. M. Lawson, Univ. of Va., Charlottesville, Va.
Frank J. O'Brien, Bureau of Child Guidance, New York, N. Y.
Geo. Wakerlin, Univ. of Chicago, Chicago, Ill.

J. MURRAY KINSMAN

THE HISTORY OF MEDICINE SOCIETY AT TULANE UNIVERSITY

The History of Medicine Society at Tulane University was founded during the academic year 1933-34 as a result of the interest and earnest efforts of Gus Dawson,[1] R. Gordon Holcomb and B. Bernard Weinstein. Prior to the advent of the Society there was no organized interest in medical history on the Tulane Campus. The early papers were contributed by the members,[2] and later various guest speakers gave papers. A list of these papers through 1937 has been published in a previous issue of this Bulletin. The early meetings were attended by members only. Later in an attempt to increase interest in the history of medicine the lectures were made available to the entire Medical School student body.

The programs have been arranged by three chairmen, B. Bernard Weinstein (1933-37), J. H. Eddy, Jr. (1937-38), and G. F. Meadors, Jr. (1938-39).

Throughout its existence the Society has leaned heavily on the counsel of Professors Cummins and Mayerson, although many other members of the faculty have given freely of their time and service.

During the session 1938-39 the following papers were presented: "Metchnikoff," by Professor Harold Cummins; "Claude Bernard," by Professor H. S. Mayerson; "Random Observations on Medical Schools," by Dr. Roy H. Turner; "Medical Poets," by Dr. B. B. Weinstein; "Anthelminthics of the Middle Ages," by Professor E. C. Faust; "History of Medicine in Virginia in the Eighteenth Century," by Dr. Maxwell Lapham; "Medical Superstitions," by Dr. Charles Bahn; "Plantation Medicine," by Miss M. L. Marshall; "Medical Ethics," by Dr. Chaille Jamison.

With the session 1939-40, regular courses in the history of medicine having been introduced into the school curriculum, the Society feels that its function as a teaching organization for the student body has been discharged and it will become once more an organization restricted in its activities to the scholarly contemplation of the history of medicine by its membership.

At the present meeting of the American Association of the History of Medicine, the Society has been accepted as a Constituent Society.

B. BERNARD WEINSTEIN

[1] Since deceased.

[2] The first paper was on the "History of Purpura," by B. B. Weinstein.

THE WILLIAM WELCH SOCIETY OF NEW YORK UNIVERSITY COLLEGE OF MEDICINE

This year marks the Tenth Anniversary of the William Welch Society, organized in 1929 by a group of students at the New York University College of Medicine for the " development and advancement of interest in medical history and culture among medical students." Dr. Welch, then at the Johns Hopkins University Medical School, was touched by this token of affection and esteem coming from the students of the institution where he had started his career as a medical teacher. He wrote:

> " Your new society may be expected to stimulate that interest in the history of our profession which has been such a delight in my own life, as in the lives of so many members of the profession. Historical interests and the historical attitude of mind are not merely graces and adornments, they are actual assets in making good doctors and in contributing to the enduring, intellectual satisfactions of the medical life."

During its ten years of growth the Society has afforded an opportunity for scores of students to investigate and express themselves regarding historical aspects of medicine not included in the crowded medical curriculum. The membership is changing, but at present includes about twenty-five students. Membership into the society is accorded by the approval of a paper on any subject of medico-historical importance written by a student. In the year 1937-1938, for example, the papers presented included studies of: "Arabian Medicine," " Richard Bright and His Works," " Philip Syng Physik," "A History of Specialism in Medicine," " The Story of Puerperal Fever," " Joseph Leidy, M. D.," " History of Blood Transfusions," " The Anterior Pituitary Gland," " Phillippe Record," and others. The variety of the material is obvious. Student interest is the only criterion governing the selection of subjects.

During the last year, the Society has laid special stress on group coöperation on specific projects by way of symposia with special departments of the medical school. Thus, with the Pediatrics

Department, an evening was devoted to the "History of Infant Feeding," featuring accounts of the contributions of Czerny, Pirquet, Jacobi, and Holt. With the Pharmacology Department—and in honor of the Society's ten years' faculty advisor, Dr. George Wallace—an evening was devoted to the history of five drugs of importance in the development of modern therapy: quinine, digitalis, morphine, salvarsan, and to carry history to the present, sulfanilamide. Finally an evening was spent at the home of the school's dean, Dr. Currier McEwen, discussing the "History of Health Insurance," with papers presented on developments in the ancient and mediaeval worlds, in Germany and Russia, in England, and in America. There was no discussion at which the audience and speakers left without a deep sense of having been stimulated, having seen something new about the evolution of modern medicine.

In addition, in the last year papers were presented at regular society meetings on: "A History of Medical Cults," on "Paracelsus," and on "The History of Physical Diagnosis."

At its tenth anniversary meeting, the society had the pleasure of hearing Dr. Jerome P. Webster give a talk on "The Delight of Delving into Departed Days," as illustrated by work in the history of plastic surgery. Before the lecture, a string quartet of students and members of the faculty—arranged by the Friends of the Le Fevre Library—presented a program of Mozart and Haydn.

The closing meeting of this year was held on May 24th in conjunction with the College Medical Society. It was the privilege of the Society to hear Dr. Howard W. Haggard discuss "Items of Medical Interest in Early American Newspapers."

This tenth year of the William Welch Society's existence, finally, is marked by its becoming a constituent society in the American Association of the History of Medicine. It was enabled to do this through a gift from its founder, Dr. Sidney Licht.

The prospects for the coming year are to expand the activities of the Society to include a greater number of students, closer coöperation with the medical faculty, and to bring to students a conception of medicine's past not as something ancient and dead but as a dynamic story, living, and influencing the present world of medicine.

MILTON I. ROEMER, *President*

NEW YORK SOCIETY FOR MEDICAL HISTORY

On the wintry night of February 27, 1939, after the storm of discussion had died down, there lay in a doctor's office on the hostile soil of Manhattan, a newborn infant named New York Society for Medical History. As the youngest child taken to the bosom of the national mother, the New York Society has not even by-laws to cover its bare limbs, and its ultimate constitution is in the gerundive state. As it stirs restlessly in its cradle, the New York Society cannot properly speak of progress. All it can do is to ask questions, and since no one expects a baby to be tactful, we should not be surprised if the questions are embarrassing:

Since the sister cities of Philadelphia and New York are so near each other, what morbific exhalation from the more populous metropolis has been responsible for the death of our former societies of medical history? Why was Philadelphia's historical celebration of its Old Blockley not duplicated by New York's celebration of its Bellevue? Why does the historical section of the College of Physicians of Philadelphia meet throughout the academic year, while the historical section of the New York Academy of Medicine meets only quarterly? Why has Philadelphia two chairs of medical history while New York has none? Hush, child! wait until the company goes home, and father will explain everything.

The New York Society, after reading the obituaries of its relatives, is uncertain of its own health. For these reasons, while there is still time, it wishes to place on record the names of the daring and devoted midwives who delivered it: President, Dr. Gregory Zilboorg; Vice-President, Dr. Victor Robinson; Secretary-Treasurer, Dr. Walter R. Bett. A committee was appointed for studying a plan of survival, with Dr. Victor Robinson as chairman, Mr. Albert Deutsch and Dr. George Rosen as committee members, and Dr. Gregory Zilboorg serving on the committee ex-officio, and Dr. Walter R. Bett, ex-officio as secretary. Dr. Victor Robinson was elected to represent the affiliated society as delegate to the American Association of the History of Medicine. The ancient Romans had a special midwife, Opigena, to render assistance in difficult childbirth. The Opigena

of the New York Society is Dr. Henry E. Sigerist, who was elected Honorary President. As soon as the New York Society begins to exhibit any of the familiar symptoms of the marasmus of apathy, it is hoped that the Honorary President will help to administer corrective doses of cod liver oil.

There is much to be done, and if the New York Society overcomes the handicaps of its heredity and environment, it may grow into useful manhood. Even today the New York Society could tell of its hopes and plans, but a year hence they may lie at the feet of time, as broken as Hitlerian promises. So let us wait.

VICTOR ROBINSON, *Delegate*

THE OSLER SOCIETY OF MEDICAL HISTORY OF OKLAHOMA CITY

The Osler Society of Medical History of Oklahoma City, Oklahoma was formally organized in April of 1939. The membership at present consists of seven physicians who are interested in a systematic study of medical history. Meetings are held every two months, and in general the plan of study will follow that outlined by Dr. Henry E. Sigerist in the April, 1934 *Bulletin of the Institute of the History of Medicine.*

On May 1st, 1939 the organization was made a Constituent Society of the American Association of the History of Medicine.

Membership List

Dr. Anson L. Clark
Tullos O. Coston
Bert F. Keltz
John H. Lamb
Dr. L. J. Moorman
Gerald Rogers
Robert I. Trent

Constitution and By-Laws

I. purpose

Article 1. The purpose of this society shall be to promote study, research, and interest in the history of medicine and allied subjects. Its aims may be achieved by:

a. meetings of the society;

b. Functioning as a constituent society of the American Association of the History of Medicine.

II. membership

Article 2. For the first year at least the membership shall be limited to seven men. Additional members may be admitted to the society by the unanimous approval of the members.

III. OFFICERS

Article 3. There shall be one officer of the society, designated as President-secretary, who will serve for a period of two years. He shall keep minutes of the meetings of the society, keep a list of the members, carry on such correspondence as may be necessary with the American Association of the History of Medicine, and notify members of the society as to the time and place of each meeting.

IV. ACTIVITIES

A. *Meetings*

Article 4. Five meetings shall be held each year, time and place to be designated by the president-secretary. Efforts will be made to hold the meetings the forepart of May, September, November, January, and March.

B. *Plan of Study*

Article 5. A definite plan of study shall be outlined in the by-laws. This may vary from time to time by a three-fourth vote of the members.

C. *Relationship to the American Association of the History of Medicine*

Article 6. Upon election as a constituent society of the American Association of the History of Medicine, our society shall function as a unit of that Association and cooperate with its activities.

D. *Relationship to Local Medical Organizations*

Article 7. Upon occasion the society may have outstanding visitors interested in the field of medical history. At such times the meetings may be opened to the general medical profession, as a means of more broadly stimulating interest in the field of medical history.

V. DUES

Article 8. The annual dues for the society shall be fixed from year to year at such levels as determined by the members. They shall include the fee necessary to maintain society membership in the American Association of the History of Medicine.

VI. AMENDMENTS

Article 9. Proposed amendments to the constitution must be submitted in writing at the meeting preceeding the meeting at which they are to be voted upon. The constitution may be amended at that time by a three-fourth affirmative vote of all of the members present or voting by letter.

BY-LAWS

I. PLAN OF STUDY

Article 1. The following plan of study may be generally adherred to, with such modifications as may be made by the unanimous approval of the members:

a. In general the plan of study will follow the outline prepared by Dr. Henry E. Sigerist's 'On the Teaching of Medical History,' reprinted from the *Bulletin of the Institute of the History of Medicine,* April, 1934.

b. Two or three members shall report in about twenty minutes on his findings from reading suggested books or articles, following which a general discussion will take place.

c. One meeting each year may be varied from the routine plan of study. In that two members may discuss any phase of medical history in which they may have some particular interest.

II. AMENDMENTS

The by-laws may be amended by a three-fourth affirmative vote of the entire membership.

BERT F. KELTZ, *President-secretary.*

THE CADUCEAN SOCIETY OF CREIGHTON UNIVERSITY SCHOOL OF MEDICINE

The history of the Society has been reported in a letter by Dr. C. M. Wilhelmj of which we give the following extract:

"The Caducean Society is a student medical History Club, organized and governed by the students themselves. I act only in an advisory capacity. When I came to Creighton University School of Medicine in 1930, I immediately began laying plans for the teaching of medical history. I corresponded with Col. Garrison on the subject and among other things he suggested the organization of a Medical History Club. The Society was organized that winter and has held monthly meetings during the school year ever since.

The meetings consist of a paper on some phase of Medical History or the cultural side of medicine followed by an address by some invited speaker. The last meeting of the year is usually somewhat more formal, often a banquet with an out of town speaker.

The membership is limited to 30 and usually averages about 20. Before admittance the prospective member must present a paper before the society.

In 1934 they published Vol. I of the Proceedings of the Caducean Society. Lack of funds has made it impossible to do this each year, but they hope to bring out subsequent volumes at irregular intervals.

In 1934 the Caducean Society organized and sponsored the History of Science Section of the Nebraska Academy of Science. Most of the papers presented in this section are by members of the Caducean Society."

Program of the Caducean Society of Creighton University School of Medicine for 1938-1939:

Oct. 1938

Raymond H. Hiroshige, Sophomore in Medicine: "Folklore in Hawaiian Medicine."

Arthur G. Umscheid, Ph. D., Asst. Professor in History: "Rapidly Changing European History."

Nov. 1938

Thomas W. McIntosh, Sophomore in Medicine: "Men of Music and Medicine."

Cecil Berryman, well-known midwest music teacher: "An Analysis of the Structure of Great Musical Compositions" with an illustrative recital by Mr. Warren Berryman and Miss Margaret Shotwell.

Jan. 1939

Clarence W. Spellman, Sophomore in Medicine: "Folklore Medicine among the Mayan Indians."

Dr. James W. Martin, M. D., Associate Professor of Orthopedic Surgery: "Historical Aspects of Orthopedic Surgery."

Feb. 1939

Ephraim Woll, Freshman in Medicine: "The History of Russian Medicine up to and including 1918."

Symposium on Ethics in Medicine and Surgery by Rev. Herbert C. Noonan, S. J., Professor of Philosophy and Head of the Department.

Dr. Frank P. Murphy, A. B., M. D., Associate Professor of Obstetrics

Dr. Maurice E. Grier, M. D., M. Sc., Professor of Obstetrics and Gynecology, and Director of the Dept.

Dr. William H. Schmitz, B. S., M. D., Associate Professor of Urology

Dr. Fred J. Schwertley, M. D., Assistant Professor of Surgery

March 1939

Eugene Autard, Senior in Medicine: "General Folklore in Medicine."

Ralph Luikart, M. D., F. A. C. S., Assistant Professor of Obstetrics: "Medicine in the Balkans during the World War."

April 1939

Fred Silverman, Junior in Medicine: "History of Eunuchism and Self-Mutilations."

William L. Sucha, B. S., M. D., Associate Professor of Orthopedic Surgery and Director of the Department: "A Moving Picture and Illustrative Talk on Development of Operative Procedures in Orthopedic Surgery."

May 1939

"A Night in Prague"

A joint informal meeting of Caducean Society, Obstetrical and Gynecological Society, and Gamma Pi Sigma, all of Creighton University School of Medicine.

Guests of Honor—Dr. Edwin C. Henry, M. D. and all principal speakers during the scholastic year before these organizations.

On the 5th and 6th of May, the students who presented their papers before our Society traveled to Lincoln, Nebr. to read their papers before the historical section of the Nebraska Academy of Sciences.

D. E. BACA, *Secretary*

SECTION OF THE HISTORY OF MEDICINE OF THE RICHMOND ACADEMY OF MEDICINE

The Section of the History of Medicine of the Richmond Academy of Medicine was organized October 23, 1934, and in its brief existence has justified its founders' hopes for its usefulness.

Its annual meetings, preceded by a banquet to which members of the Academy and their wives are invited, have become occasions of importance. The membership has grown from thirty-one charter members to a total of 85. Associate membership is open to physicians in the state, and honorary members are elected from time to time.

Three portraits of medical interest have been given the Academy to adorn its building by members of the Section: one of Philip Syng Physick, believed to have been painted by Sully; one of "Long Administering Ether," by Maurice Seigler; and one, by Bjorn Egeli, of Walter Reed for whom the Section has named its annual meeting day and its lectureship.

Gifts such as William Harvey's *Anatomical Exercises*, edition of 1673; a silver inlaid snuff box once belonging to Dr. James Drew McCaw who died in 1842, and a case of surgical instruments used by Dr. Harvey Black about 1870, have been presented to the Academy through the Section.

Exhibits on a variety of subjects have been arranged: on Medical Manuscripts and Incunabula; on Books Written by Virginia Physicians; on Photographs of Virginia Physicians from the Seventeenth to the Twentieth Century; on Confederate Medical and Surgical Manuals, and on Medicine in Ancient Egypt.

Brief papers such as *Mad Stones in Virginia* by Wyndham B. Blanton; *A Few Instances in the Early Life of Ephraim McDowell* by Hugh H. Trout; *A Sketch of Edouard Brown-Sequard* by Beverley R. Tucker; *Confederate Medical and Surgical Manuals* by Harry J. Warthen, and *Walter Reed at the University of Virginia* by J. C. Flippin, have been read before the Section and its guests.

The Walter Reed Lectureship has brought to the Academy five distinguished speakers: Dr. Stewart R. Roberts of Atlanta spoke on

The Medical Aspects of the Andersonville Prison; Dr. David Riesman of Philadelphia, on *Education in a Mediaeval University*; Dr. Hubert A. Royster of Raleigh, on *The Adventurous Life of Edward Warren, Bey*; Colonel Edgar Erskine Hume of the United States Army Medical Corps, on *The Medical Work of the Knights-Hospitallers*; and Dr. Henry E. Sigerist of Baltimore, on *Leonardo da Vinci and Renaissance Science.*

The following men have served as Chairman of the Section: Drs. James K. Hall, Beverley R. Tucker, Wyndham B. Blanton, J. Shelton Horsley and William B. Porter; as Vice-chairman: Drs. Beverley R. Tucker, M. Pierce Rucker, J. Shelton Horsley, William B. Porter and B. Randolph Wellford; as Secretary-Treasurer: Drs. J. Powell Williams, Harry J. Warthen, Paul D. Camp, B. Randolph Wellford and E. H. Terrell.

It is believed that the recent election of the Section as a constituent society of the American Association of the History of Medicine will further stimulate its efforts and improve its work.

WYNDHAM B. BLANTON

MEETING OF THE COUNCIL

SUNDAY, APRIL 30, 1939

Hotel Chalfonte, Roberts Room

Dr. WALTER R. STEINER, Presiding

AFTERNOON SESSION

Dr. Steiner called the meeting to order at 3 o'clock and welcomed the 48 members of the Council and members of the Association attending the meeting.

I. REPORTS OF THE OFFICERS

1. *Report of the President*

I shall give no extended report today. Since January 1, 1939, we have been living under our new Constitution and By-Laws. We have made a good start and hope to increase greatly our membership list and the number of Constituent Societies.

2. *Report of the Secretary*

In October, 1938, the Council decided to put the new Constitution into effect on January 1, 1939, and authorized the newly elected Secretary to take office on November 1. The membership list turned over to the Secretary contained 368 names. It was found that 3 members were deceased, and that there was a large number listed who had not paid dues for several years so that it was difficult to say whether they were still to be considered as members or not.

The first action of the Secretary was to send a copy of the new Constitution and By-Laws with an explanatory letter to all members on the list inviting them to maintain their membership. A follow-up letter was mailed to those members who had not replied a few weeks later, and at the same time a number of persons interested in the history of medicine were approached and invited to join the Association.

The Secretary also got in touch with various local medical history groups inviting them to apply for membership as Constituent Societies. By April 1, 1939, 3 members of the original list of 368 had died, 49 had formally resigned their membership and 78 had not replied to any letter of the Secretary nor had they paid dues so that they should be considered as having resigned. During the same period 81 new active members and 9 Constituent Societies had been elected by the Council so that on April 1 the membership was the following:

Constituent Societies	9
Honorary Members	7
Active Members	312
TOTAL	328

Considering the fact that the Association had many members who had shown little interest in the past and that the dues have been raised from $1.50 to $5.00, the result is encouraging, particularly as new applications for membership are coming in all the time. With the 27 candidates coming up for election as active members and 6 as Constituent Societies, the total membership will be brought up by May 1 to 361. The geographic distribution of the members was the following on April 1:

STATE	NO. MEMBERS	STATE	NO. MEMBERS
Alabama	3	Michigan	10
Arizona	1	Minnesota	3
California	11	Missouri	4
Canada	12	Nebraska	3
Colorado	3	New Jersey	8
Connecticut	9	New York	59
District of Columbia	7	North Carolina	4
Florida	1	Ohio	19
Georgia	2	Oklahoma	1
Hawaii	2	Pennsylvania	57
Illinois	13	Rhode Island	2
Indiana	6	South Carolina	4
Iowa	2	Tennessee	2
Kansas	2	Texas	2
Kentucky	3	Virginia	7
Louisiana	4	West Virginia	4
Maryland	28	Wisconsin	7
Massachusetts	15		

The Association has no members in the following States: Arkansas, Delaware, Idaho, Maine, Mississippi, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Oregon, South Dakota, Utah, Vermont, Washington, Wyoming.

I have no doubt that the membership can be increased considerably. So far, members were recruited primarily from the Eastern States and there are many doctors interested in the history of medicine in the Middle West, West and South who may be approached. Another way to increase the membership is to get in touch with dentists, public health officers, nurses, and pharmacists interested in the history of their respective fields. The Constituent Societies

can help the Association a great deal by encouraging their members to join the Association individually.

One of the most gratifying symptoms was that the Association stimulated the organization of local societies and it is to be hoped that every state will have a local group in a not too distant future.

I wish to suggest that we make an effort to increase our membership planfully: we should be able to have 500 members in 1940 and should then increase our membership by at least 50 every year until we reach 800 which is not too ambitious a figure considering the large number of physicians in this country.

A complete list of members indicating their occupations and geographic distribution will be published in the January number of the BULLETIN.

The Secretary expresses the wish that he may be kept informed about activities of the Constituent Societies. He has a special folder for every Society and is anxious to build up archives that will give information about medico-historical activities all over the country.

DISCUSSION

DR. KISER: A brief statement of the aims and purpose of the organization should be printed together with a description of the BULLETIN and should be sent with application blanks endorsed by members to those of their friends that they consider eligible.

SECRETARY: I greatly welcome this suggestion and will be glad to follow it. I will have a leaflet printed and sent out to the members.

Dr. HOLCOMB suggested that the geographic era of the Association be enlarged to include Mexico and other South American countries. On motion of the Secretary, the discussion of this point was postponed.

Dr. KRUMBHAAR: The fact that the BULLETIN has become the official organ of the Association should be one of the strongest points in getting new members. I express my sense of gratitude for having the BULLETIN become the Association's organ.

SECRETARY: There is no doubt that our membership can be increased quite considerably. So far we have only scratched the surface. There are still people who have made distinguished contributions to the history of medicine and yet do not belong to the Association. They have never heard of it or have never been approached. It also seems essential to me that we get young people into the Association. Any society that does not get young members must sooner or later die of old age. I would like to appeal particularly to those of us who teach medical history in medical schools. We all know young people who are greatly interested in the history of medicine but probably would not dare to apply for membership in a national society. We

must let them know that they are most welcome. I am particularly pleased to see the William Welch Society of New York University, which is a student organization, represented by a delegation of 3 members at this meeting and I hope that other student societies will follow this example.

Dr. STEINER mentioned that some local societies were afraid to lose their individuality and independence by affiliating with the Association.

SECRETARY: I am glad that this point has been brought up. The local groups need not be afraid of losing their individuality or independence. The Association will never try to force policies upon the local groups. Quite the contrary is the case: the local groups being all represented on the Council direct the policy of the Association, and we feel that it is a definite advantage for a local group to be affiliated. It gives it a chance to publish its annual report and through the BULLETIN it is kept informed about activities all over the country. The Association welcomes every local group and feels that it can greatly benefit through its advice. On the other hand, the Association is ready to help any local group in its efforts whenever help may be needed. Coöperation between the groups is important. In Baltimore we have three medical history clubs: the Johns Hopkins Club, the Osler Society and the Cordell Society, each of which has a very pronounced individuality. Every year we have a joint meeting of the officers at which we establish the program of the year in such way that one meeting is held every month. As a result of this coördination all meetings are well attended and very successful.

Dr. STEINER drew the attention of the meeting to the gavel of the Association which was presented by Dr. Russell Haden of Cleveland. The gavel was made of wood from trees that grew on the birthplace of Ephraim McDowell.

3. *Report of the Treasurer*

RECEIPTS

Received from previous Treasurer	$ 144.51
Gift—E. M. M. Warburg, New York	1,000.00
Gift—Dr. Charles W. Burr	100.00
Back dues, 1937 and 1938 (Dr. Jas. Alex. Lyon)	7.00
Dues in advance for 1940 (Dr. J. C. Bell)	5.00
1939 Dues for 273 members	1,362.90 *

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*1939 Dues for Col. W. Lee Hart: $1.50 paid last year, $3.50 this year. 3 Canadian checks netted only $4.80 each instead of $5.00, or $.60 too little.

Dues for 273 members at $5.00 should be	$1,365.00
Less variations	2.10
	$1,362.90

1939 Dues for 9 Constituent Societies	90.00	
1939 Dues for International Society, 32 members	96.00	
Subscriptions to *Janus* for 18 members	63.00	
TOTAL RECEIPTS		$2,868.41
DISBURSEMENTS		
Filing Cabinet	$ 53.25	
Printing and stationery	184.12	
Stamps, postcards, etc	88.50	
Subscriptions to *Bulletin of the History of Medicine* for 273 individual members at $4.00	1,092.00	
and for 9 Constituent Societies at $6.00	54.00	
International Society—dues for 32 members	96.00	
Subscription to *Janus* for 18 members at special rate of $3.50	63.00	
TOTAL DISBURSEMENTS		$1,630.87
BALANCE APRIL 15, 1939		$1,237.54

DISCUSSION

THE TREASURER raised the question whether members who have not paid dues should be stricken from the membership list.

On motion from the floor duly seconded, the Council unanimously voted that all members who have not paid their dues and have not been heard from by June 1, 1939, shall be formally dropped from the Association.

THE PRESIDENT appointed Dr. Beardsley and Dr. Holcomb *Auditing Committee* for the Treasurer's report, and appointed Dr. Krumbhaar, Dr. Dittrick and Dr. Kiser *Nominating Committee* for the elections at the Business Meeting on May 1.

4. *Report of the Editor*

In November, 1938, the following agreement was made between the Director of the Johns Hopkins Institute of the History of Medicine and the Council of the Association:

1. The *Bulletin of the Institute of the History of Medicine* shall be published from January 1, 1939 on as:

   Bulletin of the History of Medicine, Organ of the American Association of the History of Medicine and of the Johns Hopkins Institute of the History of Medicine.

2. All members of the Association (Constituent Societies, Active Members and Honorary Members) shall receive the BULLETIN free of charge.

3. The Association shall pay the Institute $4.00 for each paying active member and $6.00 for each paying Constituent Society. This presupposes that the Council will fix the dues for Active Members at $5.00, for Constituent Societies at $10.00.
4. The Institute shall publish the BULLETIN, as heretofore, at the Johns Hopkins Press. It shall pay for the cost of production and distribution and shall attend to any deficit incurred in the publication of the BULLETIN.
5. The Institute shall publish every year at least 500 pages in ten numbers and shall publish the annual reports of the Constituent Societies. Twenty-five reprints of the reports shall be given to the Societies free of charge.
6. The BULLETIN shall remain the property of the Institute.
7. The Director of the Institute shall be Editor of the BULLETIN and shall consult with the Council as to Association material to be included. Otherwise he shall have full control of the BULLETIN.
8. The Editor shall submit a financial statement to the Council for its information at every annual meeting.
9. Should this agreement prove unsatisfactory, either partner could call it off at an annual meeting, the discontinuance to take effect after the completion of the current year.

It was felt that such an agreement should be satisfactory to both partners. It will give the Association a journal without any financial risk and will benefit the Institute by increasing the circulation of the BULLETIN.

In order to give the Council an idea of the financial status of the BULLETIN, the Editor disclosed the following figures: the cost of printing one page amounts to $4.63 which includes the cost of illustration and of the use of foreign type (Greek, Arabic, Russian, Chinese, etc.). Volume VI published in 1938 had 1,064 pages and 193 illustrations. It was printed in 750 copies so that the cost of one copy was $6.66. The Institute receives from the Association $4.00 for each active member and $6.00 for each Constituent Society. Fifteen per cent of these contributions are paid to the Johns Hopkins Press which is handling and mailing the BULLETIN. A deficit is therefore unavoidable and is covered by the Institute budget. The deficit will be reduced as soon as a larger edition can be printed, but it will be a long time before the BULLETIN will become self-supporting. The deficit could also be reduced by publishing only 500 or 600 pages a year instead of 1,000, but there is so much excellent material that has to be published that it would be a pity to reduce the number of pages. We feel very strongly that the publication of the BULLETIN is essential to the development of medical history in the country and as the finances of the Institute are secure for the next ten years, we are glad to make this contribution to the Association.

5. *Report of the Delegate to the International Society*

As Dr. Krumbhaar was unable to attend the meetings of the International Society of the History of Medicine in 1938, the alternate delegate, Dr. Sigerist, reported. He attended the meeting of the Permanent Committee in Paris on August 23, 1937, the two meetings of the Permanent Committee in Zagreb on September 1, 1938 and in Sarajevo on September 10, 1938, and attended the 11th International Congress of the History of Medicine in Yugoslavia.

The minutes of the meetings of 1938 have been published in *Archives de la Société Internationale d'Histoire de la Médecine, Nr. 4, 1938,* which are sent to all members of the International Society. A detailed report of the International Congress in Yugoslavia was published by Dr. Sigerist in the BULLETIN, Vol. 7, 1939, pp. 99-147, and since all members have received the BULLETIN it was felt that it was not necessary to repeat the report.

The next two International Congresses of the History of Medicine will be held in Berlin in 1940 and in Rome in 1942.

II. REPORTS OF THE CONSTITUENT SOCIETIES

The reports of the nine Constituent Societies were read either by the delegates or in their absence by the Secretary. They are published on pp. 807-830.

III. ELECTIONS

1. *Constituent Societies*

The following organizations were unanimously elected as Constituent Societies:

The History of Medicine Society of Tulane University of Louisiana
Presented by Dr. B. B. WEINSTEIN

The Osler Society of Medical History, Oklahoma City

The Section of the History of Medicine of the Academy of Medicine of Richmond
Presented by Dr. WYNDHAM B. BLANTON

The Section on Medical History of the College of Physicians of Philadelphia
Presented by Dr. KRUMBHAAR

The Robert McKean Medical History Club, Princeton, New Jersey
Presented by Dr. PADDOCK

The Caducean Society of Creighton University, Omaha, Nebraska
Presented by Dr. C. M. WILHELMJ

2. *Active Members*

A list of 27 applicants duly nominated by members of the Association was read and all applicants were unanimously elected to active membership.

3. *Delegates to the International Society*

The former delegates were unanimously reëlected:

Dr. E. B. KRUMBHAAR, national delegate
Dr. HENRY E. SIGERIST, alternate delegate

4. *Honorary Officers*

Dr. E. B. Krumbhaar was unanimously elected *Honorary President* of the Association. Dr. Krumbhaar founded the Association in 1924 and guided its destinies in difficult years. The Council by electing him *Honorary President* wished to express its desire to have Dr. Krumbhaar serve the Association as a permanent officer.

5. *Nominations for Honorary Membership*

The Association has lost two honorary members, Professor Macphail and Professor Sudhoff so that it might consider the election of some new honorary members. After discussion the Council decided to recommend the following four scholars, who all have made most valuable contributions to the history of medicine, for honorary membership:

Dr. HARVEY CUSHING, New Haven, Connecticut
Dr. ARNOLD C. KLEBS, Nyon, Switzerland
Dr. RUDOLPH MATAS, New Orleans, Louisiana
Dr. CHARLES W. BURR, Philadelphia, Pennsylvania

THE SECRETARY suggested that special diplomas be made and presented to the honorary members and he further suggested that the number of honorary members be limited to not more than twelve. The Council approved these recommendations.

Upon motion of the Secretary the meeting adjourned for ten minutes at 5.10 p. m. It was called to order again by the President at 5.20 p. m.

Dr. ELLIOTT: Before we proceed in the agenda, I wish to reopen the discussion on Constituent Societies. In Toronto there is a group of 15 members who meet eight times a year in each other's homes. It was started 20 years ago. Four members of this group are members of the Association. What has the Association to offer to such a small group?

SECRETARY: The Association can offer the club its publication, can print its annual report and in such a way put it in touch with the many other

American local groups, can help it in developing interest in medical history in Toronto, and the Association will benefit by having a member of the Toronto group on its Council and by having it participate in its research projects. In course of time affiliation with the Association will become the official recognition of a local group.

IV. New Activities

1. *Garrison Lecture*

Secretary: Article 16 of the Constitution foresees that a distinguished lecturer may be invited to give a *Fielding H. Garrison Lecture* at the annual meeting under conditions specified in the By-Laws. The specifications are contained in By-Law I. The Association has the funds available to provide for such a lecture.

Dr. Long suggested that the lecture be held for the first time at the annual meeting of 1940, and that the President be empowered to appoint a committee in accordance with By-Law I, Article 1.

The Secretary recommended a committee of three members. Upon motion of Dr. Long duly seconded, the Council voted to request the President to appoint a *Fielding H. Garrison Lectureship Committee.*

Dr. Steiner appointed the following committee:

Henry E. Sigerist, chairman
Esmond R. Long
E. B. Krumbhaar

2. *Scholarship Medal*

Secretary: Article 15 of the Constitution provides:

> In order to stimulate interest and research in medical history, when the funds of the Association permit, it may establish medals which the Association may grant to authors of outstanding scholarly contributions to the history of medicine or to undergraduate or graduate students, as specified in the By-Laws.

Regulations for the Scholarship Medal are specified in By-Law II. I recommend that if we decide to establish such a medal it be called in honor of William H. Welch who, by creating the first research institute of the history of medicine in the country, has emphasized the necessity of scholarship in medico-historical research. Estimates have been received from various firms, and it seems that the cost of making a set of dies for a medal of 3 inches in diameter would amount to about $300. To this must be added the honorarium for the artist which varies a great deal according to the artist

selected. The cost of producing the individual medal is negligible and could be covered from the budget. At present the Association has money available to establish one medal.

Dr. WEINSTEIN reported that in New Orleans it was found that by contracting well-known art schools and offering a small prize a model could be obtained for about $25.

SECRETARY: The first question we have to decide is whether we want to establish a medal to be granted for particular contributions of outstanding scholarly merit in the field of medical history.

Dr. ELLIOTT: There is no better way to stimulate research in the history of medicine. I move that the medal be established.

The motion, duly seconded, was accepted unanimously.

SECRETARY: The second question is in whose honor the medal should be named.

Dr. LONG: It is only appropriate that it should be named in honor of William H. Welch who did so much for medical history in this country. Make motion to that effect.

The motion, duly seconded, was adopted unanimously.

SECRETARY: I recommend that a committee be appointed whose function shall be: (1) To produce a William H. Welch bronze medal of three inches in diameter; (2) To survey the field and to make recommendations to the Council as to the awarding of the medal. The Council by a majority vote shall decide on the person to be honored.

Dr. ELLIOTT moved that the committee be composed of the President, the President-Elect and the past Presidents.

The motion, duly seconded, was adopted unanimously and *The William H. Welch Medal Committee* therefore constituted as follows:

Dr. WALTER R. STEINER, chairman
Dr. ESMOND R. LONG
Dr. DAVID RIESMAN
Dr. GERALD B. WEBB
Dr. JAMES B. HERRICK
Dr. EDWARD B. KRUMBHAAR
Dr. WILLIAM S. MIDDLETON
Dr. HENRY E. SIGERIST

3. *Student Medal*

SECRETARY: Constitution and By-Laws foresee the establishment of a second medal to be granted to "undergraduate or graduate students of universities of the United States and Canada for unpublished essays that are either the result of original research or show an unusual appreciation and understanding of historical problems." The Association has not the funds available to establish both medals this year, and I therefore recommend

that the student medal be postponed to next year and that an effort be made to raise a few hundred additional dollars during the year.

Dr. KISER: Would not an engraved certificate take the place of a medal?

Mr. ROEMER: Even if the money were available now, it seems to me that the medal would not be the best method of stimulating student interest. A money prize would probably be the best way.

SECRETARY: I am very much in favor of a money prize, but I am afraid that this could not be done in the near future. A medal, once the initial expense has been covered, costs very little while a money prize of a hundred dollars granted every year would absorb the contributions of a hundred members. I move that the whole question of the student medal be postponed to next year.

The motion, duly seconded, was carried unanimously.

4. *Meetings*

SECRETARY: The question to be discussed is whether the Association shall continue to meet in Atlantic City or whether it shall meet in other cities; whether it shall have one or several meetings during the year.

The annual meeting in Atlantic City has become an institution, and as a number of other medical organizations, to which many of our members belong, meet in Atlantic City at the same time, it may be advisable to continue the established tradition. On the other hand, the Society now has an increasing number of members from other sections of the country so that it would be important to meet in other cities, particularly in such cities where we have an active Constituent Society that could act as host. The question is open for debate.

Dr. SHRYOCK recommended that the Association meet with the American Historical Association so as to get the general historians interested in medical history. Such joint meetings would be profitable to both groups.

In view of the late hour, the discussion was interrupted and the meeting adjourned at 6.15 p. m.

EVENING SESSION

SUNDAY, APRIL 30, 1939

Hotel Chalfonte, Roberts Room

Dr. WALTER R. STEINER, Presiding

Dr. STEINER called the meeting to order at 9 p. m. The discussion on meetings was continued.

Dr. ELLIOTT thought that it had a definite advantage to know that the meeting of the Association takes place in the same city every year.

Dr. LONG shared this view but suggested that a second meeting be held in addition to the Atlantic City meeting.

SECRETARY: I move that for the time being we adopt the following policy: to hold the Annual Meeting in Atlantic City in the first week of May and to hold a second meeting in the fall or winter in connection with the meeting of some other important medical, scientific or historical society in a city where we have a Constituent Society.

Mr. ROEMER: I propose an amendment, namely, that the second meeting be held in a different part of the country each year so that within five or six years, each section of the country will have been covered.

The amendment was seconded and adopted, and the motion was carried unanimously as amended.

SECRETARY: In 1941 will be the 400th anniversary of the death of Paracelsus and in 1943 the 400th anniversary of the publication of Vesalius' Fabrica. We should commemorate these events in our meetings.

Dr. SCHWARTZ: In 1940 will be the centenary of the foundation of the first dental college in the United States (Baltimore College of Dental Surgery), of the foundation of the American Society of Dental Surgeons and of the establishment of the first journal on dentistry. I recommend that a paper be read in honor of the occasion.

The recommendations were referred to the officers for consideration.

V. RESEARCH PROJECTS

SECRETARY: The Johns Hopkins Institute of the History of Medicine, being the only research institute of its kind in the country, must necessarily extend its investigations to the whole field of medical history. I think, however, that the Association should become the center of research and the clearing-house for studies in the *History of American Medicine*. We still have many gaps in our knowledge of American medicine. Many sources have not been made available, and the history of medicine of many states has not yet been written. Research in the field should be greatly encouraged, otherwise we run the risk of building up a glorified legend of our medical past that is not true to facts. I have the following policy in mind: (1) that we appoint a research committee whose function it shall be to survey the field and to present an annual report recommending definite research projects; (2) that the Association compile and publish every year in the BULLETIN as complete as possible a bibliography of books and papers published during the year on subjects of American medicine; (3) that the Association consider the establishment of a revolving fund for the publication of monographs on American

medicine. Many such books are being written at present, but it is very difficult to find a publisher for them. Once the research work of the Association is firmly established, it should be possible to approach a foundation for a grant of $10,000 toward such a revolving fund; (4) that the Association work on all these projects in close coöperation with the Constituent Societies. The question is open for debate.

Miss BAYNE: The first two series of the Annals of Medical History should be indexed.

Dr. KISER: We have had it done. It could probably be duplicated as a WPA project. There is a crying need for research in the field of American medicine as outlined by the Secretary. The Constituent Societies can play an important part in investigating the history of their local state. The Indiana Association of the History of Medicine is hopeful of obtaining funds for the publication of a History of Medicine in Indiana.

Mr. LEIKIND: The American Society of Bacteriologists and the American Public Health Association are collecting materials for a history of American bacteriology. Our Association should coöperate with these other groups.

SECRETARY: I shall always be glad to publish papers on the history of American medicine in the BULLETIN. Once our work is firmly established, we may be admitted to the American Council of Learned Societies—a connection that would greatly benefit the Association.

THE SECRETARY moved that the President be authorized to appoint a research committee. The motion, duly seconded, was carried unanimously.

THE SECRETARY moved that the committee be requested to prepare an annual *Bibliography of American Medical History* and present a report at the next annual meeting.

The motion, duly seconded, was carried unanimously.

Dr. STEINER appointed the following *Committee on Research in the History of American Medicine*:

Dr. H. E. SIGERIST, chairman
Dr. RICHARD H. SHRYOCK
Dr. E. B. KRUMBHAAR
Dr. WYNDHAM BLANTON
Dr. ESMOND R. LONG, ex-officio

The Committee was authorized to invite additional members.

VI. MISCELLANEOUS

1. *Relations with South America*

SECRETARY: The suggestion has been made from various sides that we

admit South American historians of medicine as active members and South American societies of medical history as Constituent Societies. I am all in favor of close intellectual coöperation with South America, but there are serious technical difficulties. According to the Constitution, we can admit only citizens or residents of the United States or Canada and can elect as Constituent Societies only organizations in the United States and Canada. The admission of South American members and societies would require amendments to the Constitution and this could not be done before the next annual meeting. The Association functions as American and Canadian section of the International Society of the History of Medicine and most South American Republics have their own sections in the International Society so that the admission of South American members would cause some overlapping. We may consider establishing a special corresponding membership for South American historians, and we may also consider a Pan-American federation of societies of medical history.

Dr. LARKEY: We should know more about the South American organizations before acting. Their national societies are equivalent to our Association so that we could hardly admit them as Constituent Societies.

Dr. ELLIOTT: To bring in these societies would interfere with their representation in the International Society.

Mr. DEUTSCH: A resolution should be sent to all societies and interested people in Central and South America telling them of our interest in them. We should prepare for a Pan-American conference some five years from now.

PRESIDENT: We should correspond with the societies in South America and obtain information from them.

Mr. DEUTSCH: A resolution should be passed to the effect that we are intensely interested in the development of medical history in all American countries. The Secretary should be instructed to maintain close contact with societies in Central and South America.

Dr. LONG: I move that we record our interest in Pan-American relations and that we appoint a committee to establish cultural relations in the field of medical history with other American Republics.

The motion, duly seconded, was adopted unanimously.

Dr. STEINER appointed the following *Committee on Relations with Central and South America*:

Dr. ESMOND R. LONG
Dr. E. B. KRUMBHAAR
Dr. HENRY E. SIGERIST

2. *Library Members*

SECRETARY: The Constitution does not foresee a special library membership as does that of the History of Science Society. Libraries can obtain the *Bulletin of the History of Medicine* through subscription, and the subscription price is the same as the membership dues to the Association. By joining the Association libraries, however, can obtain Janus and Aesculape at reduced rates. I move that Article 3 of the Constitution be interpreted in such way that libraries may be eligible as active members.

The motion, duly seconded, was carried unanimously.

3. *Amendment to the Constitution*

Dr. ELLIOTT: Under the present Constitution, the Council will become very unwieldy in a few years. I move that a committee be appointed to revise the Constitution with special reference to appointing an Executive Committee within the Council.

The motion, duly seconded, was carried unanimously.

Dr. STEINER appointed the following *Committee for the Revision of the Constitution*:

Dr. JABEZ H. ELLIOTT
Dr. ESMOND R. LONG
Dr. HENRY E. SIGERIST

The SECRETARY announced that he had accepted the South African Universities' Visiting Lectureship for 1939 and would be abroad from May 31 to December 7. He moved that Dr. Owsei Temkin be authorized to act as Secretary pro tempore in his absence.

The motion, duly seconded, was carried unanimously.

The meeting adjourned at 10.15 p. m.

HENRY E. SIGERIST, *Secretary.*

BUSINESS SESSION OF THE ANNUAL MEETING

MONDAY, MAY 1, 1939

Hotel Chalfonte, Roberts Room

Dr. WALTER R. STEINER, Presiding

Dr. Steiner called the meeting to order at 2.25 p. m. Sixty-two members were present.

1. *Reports*

The Secretary read the *Memoirs* of the three deceased members, Sir Andrew Macphail, Professor Karl Sudhoff and Dr. Alfred Oughton Lee, and the meeting rose to honor the memory of these deceased members. The *Memoirs* are published pp. 799-806.

The Secretary then gave a summary report of the meeting of the Council held on the preceding day, April 30.

The Treasurer's report was accepted unanimously on recommendation of the Auditing Committee.

2. *Elections*

a. Officers.

The Nominating Committee presented the following names for election as officers for the period of January 1, 1940 to December 31, 1941:

President:	Dr. ESMOND R. LONG, Philadelphia, Pennsylvania
Vice-President:	Dr. JAREZ H. ELLIOTT, Toronto, Canada
Secretary:	Dr. HENRY E. SIGERIST, Baltimore, Maryland
Treasurer:	Dr. SANFORD V. LARKEY, Baltimore, Maryland
Editor:	Dr. HENRY E. SIGERIST, Baltimore, Maryland

A motion that the nominations be closed was seconded and carried, and the five officers were elected unanimously.

Dr. Walter R. Steiner retired and Dr. Esmond R. Long took the chair.

b. Honorary Members

Upon nomination by the Council, the following four honorary members were unanimously elected:

Dr. HARVEY CUSHING, New Haven, Connecticut
Dr. ARNOLD C. KLEBS, Nyon, Switzerland
Dr. RUDOLPH MATAS, New Orleans, Louisiana
Dr. CHARLES W. BURR, Philadelphia, Pennsylvania

3. *Miscellaneous*

Dr. LARKEY announced that the new subscription to Janus is $3.50.

Dr. KRUMBHAAR expressed his great appreciation for having been elected an *Honorary President* of the Association.

Dr. GOLDSTEIN raised the question whether under the present conditions in Central Europe the Association should be officially represented at the International Congress of the History of Medicine in Berlin.

Dr. LARKEY: The question can wait until next year's annual meeting.

Dr. KRUMBHAAR: The matter should be given careful consideration by the Council.

SECRETARY: There is no doubt that it is difficult to accept the invitation of a government that has persecuted many eminent scholars on racial principles and that makes it impossible for many prominent members of the International Society to participate in its work. So far, the Association has received no invitation so that no action need be taken today. The question will be given very careful consideration by the Council and will be brought before the annual meeting next year.

The meeting was adjourned at 3.30 p. m.

HENRY E. SIGERIST, *Secretary.*

Fig. 1.

Staff and Students of the Institute, 1938-1939.

Seated, left to right: Owsei Temkin, John Rathbone Oliver, Nell Snow Talbot, Henry E. Sigerist, Genevieve Miller.

Standing, left to right: Virginia Davidson, Helen Konjias, Ludwig Edelstein, Sanford V. Larkey, Hon Tsehung, Morris C. Leikind, Otto Neustatter.

Standing, left to right: Virginia Davidson, Helen Kondjas, Ludwig Edelstein, Sanford V. Larkey, Geneviève Miller.

REPORT OF THE ACTIVITIES OF THE INSTITUTE OF THE HISTORY OF MEDICINE OF THE JOHNS HOPKINS UNIVERSITY

During the Academic Year 1938-1939

I. STAFF

Henry E. Sigerist, William H. Welch Professor of the History of Medicine and Director of the Institute of the History of Medicine.

Owsei Temkin, Associate Professor of the History of Medicine.

John Rathbone Oliver, Associate in the History of Medicine.

Ludwig Edelstein, Associate in the History of Medicine.

Sanford V. Larkey, Lecturer in the History of Medicine.

Edward H. Hume, Lecturer in the History of Medicine.

Dr. Edward H. Hume joined the staff of the Institute as Lecturer in the beginning of the academic year. Dr. Hume was formerly Dean of the Hunan-Yale College of Medicine and President of the Colleges of Yale-in-China. He is Special Member of the Council of Medical Missions of the Chinese Medical Association and Special Member of the National Health Administration of the Government of China. He is one of the few experts on the history of Far Eastern medicine and we were fortunate in being able to secure his cooperation particularly as his field of research was not yet represented in the Institute. Dr. Hume will make his residence in New York where he is Director of the Christian Medical Council for Overseas Work, but he will come every year to the Institute and conduct a seminar.

Dr. Otto Neustätter's Research Fellowship granted by the Emergency Committee in Aid of Displaced Foreign Physicians was renewed for one year so that he could continue his work at the Institute.

On November 1, 1938 Miss HELEN KONJIAS joined the Institute. Her special function was to aid Dr. Sigerist in his sociological work by assembling and cataloging materials on the subject. At present she is engaged in sorting and cataloging the vast amount of documents (letters, diaries, manuscripts) left by the late Dr. JOHN J. ABEL.

During the academic year Dr. SIGERIST was elected President of the History of Science Society, Vice-President of the International Society of the History of Medicine, Honorary Member of the Société Yougoslave d'Histoire de la Culture Sanitaire "Hippocrate" and of the Section of the History of Medicine of the Richmond Academy of Medicine, Member of the Alpha Chapter of the Delta Omega Society (the Honorary Public Health Society) and of the Tudor and Stuart Club of the Johns Hopkins University. On November 1, Dr. SIGERIST assumed his duties as Secretary and Dr. LARKEY as Treasurer of the American Association of the History of Medicine.

Eight staff conferences were held during the academic year.

II. RESEARCH

Dr. SIGERIST spent June and July 1938 traveling extensively through the Soviet Union and conducting a travel seminar on Soviet Medicine. The purpose of the tour was to survey conditions for the third time. A report of this trip will be published in the *Bulletin*. In September 1938, while attending the 11th International Congress of the History of Medicine in Yugoslavia, he sought to obtain first-hand information about the organization of public health and medical services in that country. A report of this tour has already been published. During the winter 1938-1939 Dr. SIGERIST wrote part of a book that will be published by the Yale University Press under the title *Medicine and Human Welfare*, and he continued to assemble material for his *History and Sociology of Medicine*.

Dr. TEMKIN is now completing his *History of Epilepsy* on which he worked at the British Museum during the summer of 1938. He is preparing a book on the history of surgery which he intends to finish during the summer of 1940. At the same time he is continuing

his translation of the *Gynecology* of Soranus in cooperation with Drs. Eastman, Edelstein, and Guttmacher.

Dr. EDELSTEIN is still engaged in the publication of the *Fragments of Posidonius* and in cooperation with RENATA EDELSTEIN he has completed his source book on Aesculapius and his cult.

Dr. OLIVER continued his studies on Greek medicine.

Dr. LARKEY is continuing his work on medicine in Renaissance England and is preparing two facsimile editions of sixteenth century medical books: a herbal of 1525 printed by R. Banckes; and William Turner's *A new boke of the natures and properties of all wines*, with Mr. Philip Wagner. The work on the Hearst papyrus in cooperation with a group of California scholars is practically completed.

Dr. HUME spent part of the winter in India and is preparing the publication of the Noguchi Lectures that he delivered at the Institute last year on *The Chinese Way in Medicine*.

Dr. NEUSTÄTTER is preparing a book on *Primitive Medicine* for the series Clio Medica.

The Institute is now launching two extensive research projects. The idea of both is to make new source material available for the study of Greek and Roman medicine. One project is to collect all Papyri that contain medical texts, or any texts that illustrate conditions of medicine and public health in antiquity. In other words, the task will be to continue and to complete the work so successfully inaugurated by Karl Sudhoff in his monograph *Ärztliches aus griechischen Papyrus-Urkunden*, Leipzig, 1909. Most of the material has already been published, but in books and journals of which many are of difficult access, and the medical material is so scattered that it seems important to collect it and to publish it with English translation and commentary.

The purpose of the other project is to establish an *Index of Greek and Roman Antiquities of Medicine*, in other words, to collect the entire archeological material pertaining to medicine and public health. The *Index* will contain a photograph of every object available with full description. The model that will be followed is obviously the *Index of Christian Art* of Princeton University.

It will take a long time to accomplish these projects as we have no special funds available and will have to carry out the work on the

regular budget. We feel, however, that both projects are very promising and that particularly the *Index* will be of great service to researchers in many fields.

III. PUBLICATIONS

A. *Publications of the Institute*

The sixth volume of the *Bulletin of the Institute of the History of Medicine* was completed in December 1938. It contained 26 papers, 8 texts and documents, 3 notes and comments, and current reports on medico-historical activities in the United States. The volume had 1064 pages and 193 illustrations.

Beginning with Volume VII the *Bulletin* was published under a slightly modified title as

BULLETIN OF THE HISTORY OF MEDICINE.

Organ of the American Association of the History of Medicine and the Johns Hopkins Institute of the History of Medicine.

This was done under an agreement made between the Institute and the Council of the A. A. H. M. The *Bulletin* will remain the property of the Institute and the Director of the Institute will continue to have full control of it. The *Bulletin* will be sent to all members of the Association and the Association pays the Institute $4.00 for each Active Member and $6.00 for each Constituent Society. It was felt that such an agreement would benefit both partners in that it would give the Association a much-needed periodical without financial risk and the *Bulletin* a much wider distribution.

During the year two medical classics and two bibliographies were reprinted from the *Bulletin* and made available separately, bound in boards, through the Johns Hopkins Press:

JACOB HENLE, On Miasmata and Contagia. Translated by George Rosen, 1938, 78 pages, frontispiece, 4to.

FERDINAND COHN, Bacteria, the Smallest of Living Organisms. Translated by Charles S. Dolley, introduction by Morris C. Leikind, 1939, 44 pages, frontispiece, 4to.

W. R. LEFANU, British Periodicals of Medicine, A Chronological List. 1938, 93 pages, 4to.

LEONA BAUMGARTNER, John Howard (1726-1790), Hospital and Prison

Reformer: A Bibliography. With Introduction by Arnold M. Muirhead, 1939.

Two volumes are being prepared for the series *Texts and Documents:*

1. The Black Dart of Death, a play adapted for the stage from William Bullein's "A Dialogue against the Fever Pestilence," 1564, by SANFORD V. LARKEY.
2. A Catalogue of the Henry Barton Jacobs Collection, which is being prepared by Mr. MORRIS C. LEIKIND.

Two volumes are in preparation for the series *Bibliotheca Medica Americana:*

Volume IV. The Diaries of WILLIAM BEAUMONT.

Volume V. BENJAMIN WATERHOUSE, A Prospect of Exterminating the Small-pox; being the History of the Variolae Vaccinae, 1800.

The Institute is also considering the publication of a series of *Medical Portraits* with short biographical notes similar to the portraits of mathematicians published by the *Bibliotheca Mathematica.* There is a great demand for good authentic portraits of the leading men in medicine and this demand is often satisfied by poor prints or portraits that are not authentic. In many cases a great deal of research is required to determine whether a portrait was made from life or whether it was a mere fanciful copy. It is felt that a series of good portraits, well reproduced and published in portfolios would be most welcome to many physicians.

B. *Publications by members of the Institute*

HENRY E. SIGERIST

Report of the Activities of the Institute of the History of Medicine of the Johns Hopkins University during the Academic Year 1937-1938. *Bulletin of the Institute of the History of Medicine,* Vol. VI, No. 7, July, 1938, pp. 858-881.

Yugoslavia and the XIth International Congress of the History of Medicine. *Bulletin of the History of Medicine,* Vol. VII, No. 1, January, 1939, pp. 99-147.

A Boerhaave Pilgrimage in Holland. *Ibid.,* Vol. VII, No. 2, February, 1939, pp. 257-275.

Kagan's Garrison. *Ibid.,* Vol. VII, No. 3, March, 1939, pp. 357-362.

Materia Medica in the Middle Ages. A Review. *Ibid.*, Vol. VII, No. 4, April, 1939, pp. 417-423.

Medical History in the Medical Schools of the United States. *Ibid.*, Vol. VII, No. 6, June, 1939, pp. 627-662.

Boerhaave's Influence upon American Medicine. *Nederl. Tijdschrift voor Geneeskunde*, Jaargang 82, No. 40, October, 1938, pp. 4822-4828.

Albrecht von Haller. *Grosse Schweizer*, Atlantis Verlag, Zürich, 1938.

La commémoration de Baglivi à Raguse. Baglivi et la Doctrine Iatro-méchanique. *Scalpel*, No. 7, 1939, pp. 101-104.

Protecting the Health of a Nation. *Soviet Russia Today*, November, 1938, pp. 21, 64.

The Future of the Association of Medical Students. *The 1938 Convention Book of the Association of Medical Students*, Philadelphia, pp. 18, 30, 32.

Socialized Medicine Abroad. *Journal of The Association of Medical Students*, April, 1939, pp. 116-118, 128.

The Realities of Socialized Medicine. *The Atlantic Monthly*, June, 1939, pp. 794-804.

OWSEI TEMKIN

Review of: Artelt, *Studien zur Geschichte der Begriffe "Heilmittel" und "Gift."* In: *Classical Philology*, XXXIV, pp. 83-84.

LUDWIG EDELSTEIN

The Genuine Works of Hippocrates. *Bulletin of the History of Medicine*, Vol. VII, No. 2, February, 1939, pp. 236-248.

Review of: W. Stettner, *Die Seelenwanderung bei Griechen und Römern*. In: *American Journal of Philology*, LIX, 1938, pp. 503-505.

Review of: Peck, *Aristotle's Parts of Animals*, and Forster, *Movement of Animals, Progression of Animals*. In: *Classical Weekly*, 32, 1938, pp. 78-79.

SANFORD V. LARKEY

Shakespeare Association Facsimiles No. 15. *A Discourse of the Preservation of the Sight: of Melancholike Diseases; of Rheumes, and of Old Age*, by M. Andreas Laurentius, translated by Richard Surphlet, 1599. With an introduction by Sanford V. Larkey. Published for The Shakespeare Association by Humphrey Milford, Oxford University Press, Amen House, Warwick Square, E. C., 1938.

IV. GRADUATE STUDENTS

Miss GENEVIEVE MILLER has completed her course and finished her essay on "Albrecht von Haller's Controversy with Robert Whytt." She was granted the degree of Master of Arts in the History of Medicine at the end of the academic year.

Mrs. NELL SNOW TALBOT, Assistant Dean of the University of Illinois School of Dentistry (M. A. in Sociology) spent the year at the Institute working toward a Ph. D. degree in the History of Medicine. She completed the required course and passed the departmental examinations. As soon as her dissertation "The History of Dental Education in the United States" is finished, she will be able to present herself for the final examination before the Board of University Studies.

Mrs. HELEN PAULSON (M. A. in Economics) is continuing the work on her dissertation on "The History of Medical Social Service in the United States" for a Ph. D. degree in the History of Medicine.

Mr. MORRIS C. LEIKIND (M. A. in Bacteriology) intended to write a dissertation on "The History of Bacteriology from Leeuwenhoek to Pasteur" but had to change his subject as the new book of William Bulloch, *A History of Bacteriology* covers the field so thoroughly that a dissertation on the same subject would be superfluous. He began a new dissertation on "A History of the Filterable Viruses."

V. COURSES

During the academic year the following courses were given:

INTRODUCTORY COURSES

1. The History and Ethics of Medicine. Dr. OLIVER. One hour weekly during the academic year at Homewood.
2. Use of the Library. Dr. LARKEY. First quarter.
3. Outlines of the History of Medicine. Dr. SIGERIST. First and second quarters.
4. Medical History Seminar. Dr. SIGERIST and staff. First and second quarters.

5. History of Hygiene and Public Health. Dr. SIGERIST. Third and fourth quarters.
6. Greek and Latin Terminology in Modern Medicine. Dr. EDELSTEIN. Third quarter.

ADVANCED COURSES

7. The Aristotelian System of Biology. Dr. EDELSTEIN. Third quarter.
8. Aristotle and the Rise of Modern Biology. Dr. TEMKIN. Fourth quarter.
9. History of Surgery. Dr. TEMKIN. Third quarter.
10. Research Seminar. Dr. SIGERIST and staff. Third and fourth quarters.

This year's program was devoted to a study of certain aspects of Greek medicine.

SOCIOLOGICAL COURSES

11. Medical Economics. Dr. SIGERIST. Third quarter.
12. Sociological Seminar: Socialized Medicine. Dr. SIGERIST and Dr. LARKEY. Fourth quarter.

The course was attended by a group of 28 students of the Medical School and the School of Hygiene and Public Health. A county of the state of Maryland was assigned for study to each of 23 students who presented a report on the population of the county in its social and economic structure, on the health conditions and the medical facilities available. Five students presented reports on various health aspects of the city of Baltimore. After the survey had been completed a study was made to ascertain what influence an extension of the already existing public health services would have in the territory of the state, and the question of health insurance was studied for the city of Baltimore and for four sample counties. An attempt was made to figure out what sections of the population would be included under a health insurance scheme and what the cost would be.

13. Current Events. Dr. SIGERIST. First and second quarters.

The following subjects were discussed:

1. The National Health Conference. 2. The Attitude of the A. M. A. toward the National Health Conference. 3. The A. M. A. versus the Washington Health Association. 4. Health Surveys (Dr. LARKEY). 5. Medical Care for People on Relief in California. 6. The Health Service System of San Francisco (Coffey Plan). The Hospital Service Plan in Baltimore. 7. Group Hospitalization. 8. The Mutual Service Plan of the District of Columbia Medical Society. 9. The Meeting of the History of the Science Society in Chicago. 10. Socialized Medicine in Chile. 11. Health Services in Scotland. 12. Organized Medical Service in Yugoslavia.

14. Study Groups in the History and Sociology of Medicine. Dr. SIGERIST and staff, throughout the academic year.

Fig. 2.

Second Graduate Week in the History of Medicine, April 24-29, 1939.
In the Seminar Room of the Institute.

Study Groups

Three study groups were held during the year:

1. Members of the Institute and members of the Department of Obstetrics met twice a week throughout the year for a study and English translation of the Gynecology of Soranus.

2. Dr. Temkin met a group of students during the third quarter for a study of Latin Mediaeval Paleography.

3. Dr. Larkey met a group of students during the fourth quarter for a study of Bibliography.

VI. GRADUATE WEEK

In order to provide post-graduate education in the History of Medicine and in order to make the resources of the Institute available to students of medical history outside of Baltimore, a Graduate Week was held for the first time in April, 1938. The week was so successful and there was so much demand for another similar course that we felt encouraged to organize a Second Graduate Week in Medical History from April 24 to 29, 1939.

While last year's course centered around questions of principles and methods of teaching, this year's discussions were devoted to a period that has been particularly significant in the development of Western medicine: the Renaissance.

The course was attended by the following 39 members from 16 states:

Dr. George L. Banay	Worcester State Hospital, Worcester, Mass.
Dr. Leona Baumgartner	125 Worth St., New York, N. Y.
Mr. Walter R. Bett	255 Northern Ave., New York, N. Y.
Prof. Leicester Bradner	Brown University, Providence, R. I.
Miss Virginia Burrell	Presbyterian Hospital, New York, N. Y.
Dr. S. B. Chandler	West Virginia University, Morgantown, W. Va.
Dr. Clarence V. Costello	258 Alexander St., Rochester, N. Y.
Mrs. Eileen R. Cunningham	Vanderbilt University School of Medicine, Nashville, Tenn.
Dr. Robert S. Drews	3263 Joy Road, Detroit, Mich.
Miss Eleanor Fair	Metropolitan Life Insurance Company, New York, N. Y.
Dr. Julius Friedenwald	1013 N. Charles St., Baltimore, Md.

Dr. Reuben Friedman	877 N. 6th St., Philadelphia, Pa.
Dr. Iago Galdston	2 E. 103rd St., New York, N. Y.
Dr. William G. Harrison	1922 S. 10th St., Birmingham, Ala.
Dr. Benjamin I. Hart	453 State St., Bridgeport, Conn.
Dr. Edward F. Hartung	580 Park Ave., New York, N. Y.
Mrs. Mary Blair Hartung	580 Park Ave., New York, N. Y.
Miss Justina Hill	The Johns Hopkins Hospital, Baltimore, Md.
Dr. Richmond C. Holcomb	306 S. Madison Ave., Upper Darby, Pa.
Dr. E. L. Keyes	121 E. 60th St., New York, N. Y.
Dr. Edgar F. Kiser	226 Hume-Mansur Building, Indianapolis, Ind.
Mrs. Edwin H. Koehler	2 W. 43rd St., New York, N. Y.
Dr. Joseph Krafka, Jr.	University of Georgia Medical School, Augusta, Ga.
Dr. W. B. McDaniel, 2nd	19 S. 22nd St., Philadelphia, Pa.
Dr. Andrew A. Marchetti	525 E. 68th St., New York, N. Y.
Dr. Kate Campbell Hurd-Mead	Haddam, Connecticut
Dr. George Rosen	3111 Avenue R, Brooklyn, N. Y.
Dr. Esther Rosencrantz	1101 Green St., San Francisco, Calif.
Mr. Henry Schuman	58 W. Adams St., Detroit, Mich.
Dr. Louis L. Schwartz	1457 Broadway, New York, N. Y.
Prof. Richard H. Shryock	Department of History, University of Pennsylvania, Philadelphia, Pa.
Dr. Benjamin Spector	Tufts College Medical School, Boston, Mass.
Dr. Eleanor Patterson Spencer	Goucher College, Baltimore, Md.
Dr. William J. Stapleton, Jr.	641 David Whitney Bldg., Detroit, Mich.
Dr. Dorothy Stimson	Goucher College, Baltimore, Md.
Dr. David A. Tucker, Jr.	701 Carew Tower, Cincinnati, Ohio
Mrs. Mary Turner	The Johns Hopkins Hospital, Baltimore, Md.
Dr. B. Bernard Weinstein	Tulane University, New Orleans, La.
Dr. Alfred H. Whittaker	1427 E. Jefferson Ave., Detroit, Mich.

Fig. 3.

Second Graduate Week in the History of Medicine, April 24-29, 1939.
In the Seminar Room of the Institute.

PROGRAM

Monday, April 24

9 a. m. Registration

10 a. m. Opening Address
Dr. HENRY E. SIGERIST

Lecture:
"Economic, Social and Political Foundations of the Renaissance"
Dr. HENRY E. SIGERIST

2 p. m. Seminar:
"The Concept of the Renaissance"

8:30 p. m. Meeting of THE JOHNS HOPKINS MEDICAL HISTORY CLUB at the Baltimore Museum of Art (Charles and and 31st Streets, Wyman Park):

THE BLACK DART OF DEATH

A Play adapted for the stage from William Bullein's "A Dialogue against the Fever Pestilence," 1564, by Sanford V. Larkey

CAST OF CHARACTERS

Citizen ..... COLEMAN CITRET
Susan, his wife ..... OLIVIA HOLT
Beggar ..... HENRY G. MILLER
Antonius, a wealthy Italian merchant ..... LOUIS AZRAEL
Dr. Tocrub, a physician ..... STANLEY J. SARNOFF
Servants to Antonius .. JUSTINA HILL, JOHN B. DEHOFF
Antonius' Children,
PRISCILLA LONG, PERRIN H. LONG, JR.
Crispinus, an apothecary ..... FRANCIS P. CHINARD
Leonardus, a surgeon ..... WILLARD E. GOODWIN
Burial Man ..... MILTON GUSACK
Roger, servant to the citizen .... ERNEST M. GRUENBERG
Death ..... FREDERICK B. BANG
Theologus, a minister ..... MILTON GUSACK

Directed by SANFORD V. LARKEY

In the Seminar Room of the Institute.

Fig. 4.

Second Graduate Week in the History of Medicine, April 24-29, 1939.
Scene from the play "The Black Dart of Death."

Second Graduate Week in the
Scene from the play "The Black Dart of Death."

Fig. 5.

Second Graduate Week in the History of Medicine, April 24-29, 1939.
Scene from the play "The Black Dart of Death."

PRODUCTION STAFF

WILLIAM PARKER — Dr. OWSEI TEMKIN
NORMAN D. MARKS — MILTON GUSACK
Mrs. J. C. TALIAFERRO, JR. — JOHN B. DEHOFF
JUSTINA HILL

Tuesday, April 25

10 a. m. Lecture:

"Ancient Traditions in Mediaeval and Renaissance Thought"
Dr. LUDWIG EDELSTEIN

2 p. m. Seminar:

"Bibliographic Problems of Renaissance Literature"

4:30 p. m. Cocktail Party in the Great Hall

8:30 p. m. Meeting of the CORDELL HISTORICAL SOCIETY of the University of Maryland

"The Influences Exercised by Conventional Medicine on the Beginning of Autonomous Dental Education"
Dr. J. BEN ROBINSON, D. D. S., F. A. C. D., Dean of the School of Dentistry, University of Maryland

"The Friendship of Christopher Wren and Robert Boyle"
RUTH MUSSER and JOHN C. KRANTZ, JR., Department of Pharmacology, School of Medicine, University of Maryland

Wednesday, April 26

10 a. m. Lecture:

"Science and Technology in the Renaissance"
Dr. HENRY E. SIGERIST

2 p. m. Seminar:

"Some Biological Problems of the Renaissance"

4 p. m. Demonstration of the *Harvey* and *Leeuwenhoek Films.*

Thursday, April 27

10 a. m. Lecture:

"The Physician in the Renaissance"
Dr. OWSEI TEMKIN

2 p. m. Seminar:

"Diseases Prevailing in the Renaissance and Their Interpretation"

4:30 p. m. Reception at the Tudor and Stuart Club of The Johns Hopkins University, at Homewood

Exhibit of rare old books in the Library of The Johns Hopkins University

Friday, April 28

10 a. m. Lecture:

"Hygiene and Public Health in the Renaissance"
Dr. SANFORD V. LARKEY

2 p. m. Seminar:

"Medical Literature in the Vernacular: English, German, French, Italian"

4 p. m. Tea in the Great Hall

7:30 p. m. Dinner

Address by Dr. JOHN RATHBONE OLIVER: "The Oxford of Anthony Wood"

Saturday, April 29

10 a. m. Lecture:

"Medical Development after the Renaissance"
Dr. HENRY E. SIGERIST

11 a. m. Closing Address:

Dr. ALAN M. CHESNEY
Dean of the School of Medicine of The Johns Hopkins University

The response to this Second Graduate Week was again most gratifying and the plan to have the discussion centered around a period proved very satisfactory. While we do not intend to give such a course every year there is no doubt that we will hold similar Weeks in the future.

Fig. 6.

Second Graduate Week in the History of Medicine, April 24-29, 1939.
Members of the Graduate Week examining an exhibit of new books on medical history.

Members of the Graduate Week examining an exhibit of new books on medical history.

Fig. 7.

Second Graduate Week in the History of Medicine, April 24-29, 1939.
Tea in the Great Hall of the Welch Medical Library.

VII. THE JOHNS HOPKINS MEDICAL HISTORY CLUB

The year's activities of the Club are given in this *Bulletin*, pp. 809-810.

VIII. THE SCIENCE AND SOCIAL RELATIONS CLUB

The Social Problems Forum, a student organization that used to meet regularly in the Institute was discontinued since the Johns Hopkins Chapter of the Association of Medical Students had taken over most of its functions. A *Science and Social Relations Club* was organized instead, which met for discussions on two evenings every month in the Institute. During the academic year the following meetings were held:

December 8, 1938	Organization meeting. Discussion of the year's program.
January 6, 1939	"The Social Implications of Ancient and Mediaeval Technology" Dr. HENRY E. SIGERIST
January 20	"The Social Background of the Science of Newton's Period" Dr. EVELYN HOWARD and EMIL KOTCHER
February 2	"Science and Society in the 19th Century" LOUIS L. ENGEL and FRANCIS P. CHINARD
February 16	"Science on the American Scene" DOROTHEA STATER, E. M. GRUENBERG, ELLIOTT JAQUES and MAURICE SHILS
March 2	"Science on the American Scene (Cont.)" E. M. GRUENBERG, WILLIAM METCALF and MILTON GUSACK
March 16	"Science and Unemployment" HARRY J. LAWLER

The meetings were very well attended and the discussions were found most stimulating so that the Club will continue its activities during the next academic year.

IX. LECTURES

The following lectures were given by members of the Institute during the academic year:

Dr. HENRY E. SIGERIST

September 3, 1938 *Entwicklungslinien der sozialen Medizin.*
Croatian Society of Medicine, Zagreb, Yugoslavia.

September 13 *Baglivi et la Doctrine Iatromécha nique.*
Eleventh International Congress of the History of Medicine, Dubrovnik, Yugoslavia.

September 23 *Boerhaave's Influence upon American Medicine.*
Two hundreth Anniversary of the death of Herman Boerhaave, Leiden, Holland.

October 24 *The Cultural Background of a Scientific Discovery: William Harvey and the Circulation of the Blood.*
University of Missouri, Columbia, Mo.

October 24 *Medicine and Social Change.*
Ibidem.

November 2-4 *Medicine and Human Welfare. 1. The Significance of Disease; 2. The Significance of Health; 3. The Physician's Mission.*
The Dwight H. Terry Lectures at Yale University, New Haven, Conn.

November 6 *Medicine and Human Welfare.*
Community Forum, Bridgeport, Conn.

November 8 *Medicine As a Social Institution.*
The Interne Council of America, Baltimore Chapter, Baltimore, Md.

November 9 *Europe in 1938.*
The Caduceus Club, Baltimore, Md.

November 14 *A Boerhaave Pilgrimage in Holland.*
The Johns Hopkins Medical History Club, Baltimore, Md.

November 21 *The Political Tension in Europe in 1938.*
The German-American League for Culture, Baltimore, Md.

December 6	*Economic Factors in the History of Science.* Goucher College, Baltimore, Md.
December 30	*History, Science and Society.* Joint Session of the American Historical Association and the History of Science Society, Chicago, Ill.
January 6, 1939	*The Social Implications of Ancient and Mediaeval Technology.* The Science and Social Relations Club, Baltimore, Md.
March 11	*Mediaeval Music and Medicine.* The Baltimore Music Club, Baltimore, Md.
March 17	*The History of Medical Ethics.* Association of Medical Students, Chapter of the University of Maryland, Baltimore, Md.
March 28	*Leonardo da Vinci and Renaissance Science.* Section of the History of Medicine of the Academy of Medicine of Richmond, Va.
April 4	*The History of Science and Its Place in Contemporary Civilization.* The Graduate School of the Department of Agriculture, Washington, D. C.
April 5	*Seminar on the preceding subject.* Ibidem.
April 5	*The Inter-relationships of the Histories of Chemistry, Medicine, and Pharmacy.* Annual Meeting of the American Chemical Society, Baltimore, Md.
April 17	*Science and the Social Structure.* Fourteenth Lecture in the Series "Science as a Social Force." The Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.
April 20	*Collective Security.* Student's Rally for Peace, The Johns Hopkins University, Baltimore, Md.
May 12	*Two Pioneers of Public Health: Nikolai Alexandrovich Semashko and Andrija Štampar.* The Delta Omega Society, Baltimore, Md.

May 17	*Science and the Greek Tradition.* Symposium on the Greek Tradition of the Baltimore Museum of Art, Baltimore, Md.

Dr. SIGERIST discussed the organization of medicine in the Soviet Union before the following groups:

August 26, 1938	Group of physicians in Zürich, Switzerland
November 18	Symposium of "Health and Hygiene," New York, N. Y.
November 20	The College Hour, Goucher College, Baltimore, Md.
December 7	The Lecture Group, Baltimore, Md.
December 15	The American Russian Institute, New York, N. Y.

Dr. SIGERIST discussed socialized medicine, the National Health Program, problems of health insurance, and similar subjects before the following groups:

December 11, 1938	The Baltimore Open Forum, Baltimore, Md.
December 14	The Engineer's Club, Baltimore, Md.
January 5, 1939	The Free State Civic Club, Baltimore, Md.
January 7	The Saturday Night Club, Baltimore, Md.
January 12	Association of Medical Students, New York University, New York, N. Y.
January 13	The Worker's Fellowship, of the New York Society for Ethical Culture, New York, N. Y.
January 26	Twenty-fifth Anniversary Celebration of the Northern Dental Society, New York, N. Y.
February 16	American Students' Union, Johns Hopkins University, Baltimore, Md.
February 17	The Interne Council of America, New York Chapter, New York, N. Y.
February 18	The Academy of Medicine of Newark, N. J.
February 19	The People's Forum, Philadelphia, Pa.
February 23	The Junior Association of Commerce, Baltimore, Md.
February 24	Legislative Conference of the Free State Civic Club, Baltimore, Md.

March 1	Roland Park Country School, Baltimore, Md.
March 9	Assembly, Goucher College, Baltimore, Md.
April 14	The Committee of Physicians, New York, N. Y.
May 27	The First All-Maryland Health Conference, Baltimore, Md.

Dr. OWSEI TEMKIN

September 2, 1938	*Demonology and the Medical Tradition in the Middle Ages.* Eleventh International Congress of the History of Medicine, Zagreb, Yugoslavia.
November 14	*Impressions of the International Congress of the History of Medicine in Yugoslavia.* The Johns Hopkins Medical History Club, Baltimore, Md.
April 3, 1939	*Preventive Medicine in the Middle Ages.* Joint Meeting of the Section on Medical History and the Section on Public Health, Preventive, and Industrial Medicine of the College of Physicians of Philadelphia, Pa.

Dr. JOHN RATHBONE OLIVER

November 14, 1938	*A Hectic Summer In Italy.* The Johns Hopkins Medical History Club, Baltimore, Md.
January 27, 1939	*Finding Freedom from Fear and Worry.* The Graduate School of the Department of Agriculture, Washington, D. C.
February 8	*The Experiences of the Psychiatrist in the Criminal Court.* Women's Society of the Springfield Methodist Episcopal Church, Springfield, Mass.

Dr. EDELSTEIN spoke on *The Physician in Plato's Symposium* to the Philological Association, The Johns Hopkins University, on March 16, 1939.

Dr. LARKEY gave a lecture on *Health in Elizabethan England*, as one of the Lectures to the Laity, New York Academy of Medicine, New York, N. Y., on April 13, 1939.

X. MEETINGS

The following Meetings were attended by members of the Institute:

Medical Library Association, Boston, Mass., June 28-30, 1938 [Dr. LARKEY].

Eleventh International Congress of the History of Medicine in Yugoslavia, September 1-14, 1938 [Dr. SIGERIST, Dr. TEMKIN].

Celebration of the 200th Anniversary of the Death of Herman Boerhaave, Leiden, Holland, September 23-24, 1938 [Dr. SIGERIST].

Annual Meeting of the History of Science Society, Chicago, Ill., December 29-30, 1938 [Dr. SIGERIST].

Fifteenth Annual Meeting of the American Association of the History of Medicine, Atlantic City, N. J., April 30-May 1, 1939 [Dr. SIGERIST, Dr. TEMKIN, Dr. EDELSTEIN, Dr. LARKEY].

Journées Internationales de Médecine Sociale, Liège, Belgium, June 23-25, 1939 [Dr. SIGERIST].

XI. COLLECTIONS OF THE INSTITUTE

The collections of the Institute were increased during the academic year by:

1. Books	173	items
2. Objects	3	"
3. Autographs	10	"
4. Portraits	85	"
5. Medals	5	"
6. Documents	23	"
7. Pictures	66	"
8. Slides	97	"

XII. EXHIBITS

The following temporary exhibits were held in the Exhibition Hall of the Institute:

1. The exhibit illustrating the *Life and Work of Claude Bernard* was held over until February 1939.

Fig. 8.

Chinese relief showing the surgeon Hua T'o operating on the war hero Kuan Kung.

2. An exhibit illustrating the *History of Anatomic Illustration* and the *Work of Fabricius of Aquapendente* was opened on February 13 in connection with the Second Meeting of the Johns Hopkins Medical History Club.
3. An exhibit illustrating the *Work of Leonardo da Vinci* was opened on April 24 in connection with the Second Graduate Week.

On the occasion of this graduate course two other exhibits were displayed:

1. *Medical Books from Renaissance Presses.* In the lobby of the Welch Medical Library.
2. *New Literature on Medical History.* In the Great Hall of the Welch Medical Library.

XIII. GIFTS

The Institute again was favored by a large number of gifts from various donors. They included:

1. Books	36	items
2. Objects	3	"
3. Autographs	9	"
4. Portraits	20	"
5. Medals	5	"
6. Documents	3	"
7. Pictures	25	"

The most valuable gift received during the year was a Chinese relief representing the surgeon Hua T'o operating on the war hero Kuan Kung, presented by Dr. Edward H. Hume (Figure 8).

XIV. BUDGET

The budget of the academic year 1938-1939 amounted to $30,981.24.

XV. MISCELLANEOUS

The Institute was elected a Constituent Society of the American Association of the History of Medicine in December 1938.